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A MAGAZINE FOR ARMOR ENTHUSIASTS
Volume 4 Number 3



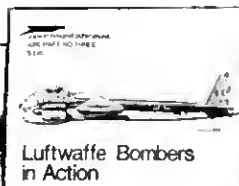
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Volume 4, Number 3
March - April 1973

Contents

The U.S. Army's M548 Tracked Cargo Carrier, by David Haugh	4
Modeling the German 8cm Mortar in 1:35th Scale, by Steven Eide	8
The Admiral and the Afrikakorps, by William Platz	9
Armor in Vietnam: Self-Propelled Artillery	10
Wargamer's Data Sheet: The U.S. Army M19A1 40mm GMC	12
AFV Inquiry: Questions and Answers for the Armor Reader	13
Tactical Markings of the Waffen-SS, Part I., by James Steuard	14
The Japanese Type 95 Light Tank "Kyu-Go"	17
Japanese Type 95 Light Tank Five-view Drawings in 1:32nd Scale by S. R. Cobb	18
Color 'n Camouflage: The German Panzer IV. at Anzio, 1944	20
Armor in Pictures: Reader submitted Armor Photos	22
German Armored Reconnaissance Units, by James Steuard	24
The Baron's Bookshelf.....with Book Reviews.....	27
Anzio, the Soft Underbelly of Europe, Part V., by John Yonos	28
New Products.....	33
Letter's to the Editor.....	34

AFV's of Italy, the continuing series by Dr. Nicola Pignato

Between 18 and 19

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Cover:

This issue's cover illustration is of a Panzerkampfwagen III. of the newly created "Deutsches-Afrikakorps", as it was seen on 12 March 1941 in Tripoli, during a combined German-Italian parade past the Mussolini Memorial. The vehicle illustrated is from the 2. Kompanie of Panzer-Regiment 5., a part of the newly arriving 5. Leichte-Division. An apparent anomaly is that the Panzer III. still carries the tactical marking of the 3. Panzer-Division, the division that gave-up Pz. Rgt. 5 to the 5. Leichte-Division. Our photo was provided by the Italian Government.

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AFV-G2 is a magazine, published monthly for Armor enthusiasts, with the purpose of gathering and disseminating information about Armored Fighting Vehicles and their employment; to provide an opportunity for persons seriously interested in the history of Armored Fighting Vehicles, in the modeling of these AFV's and associated equipment, and in the playing of military Wargames utilizing miniature AFV's, to share ideas and items of mutual interest and to promote an interest and awareness in the subject of Armored Fighting Vehicles.

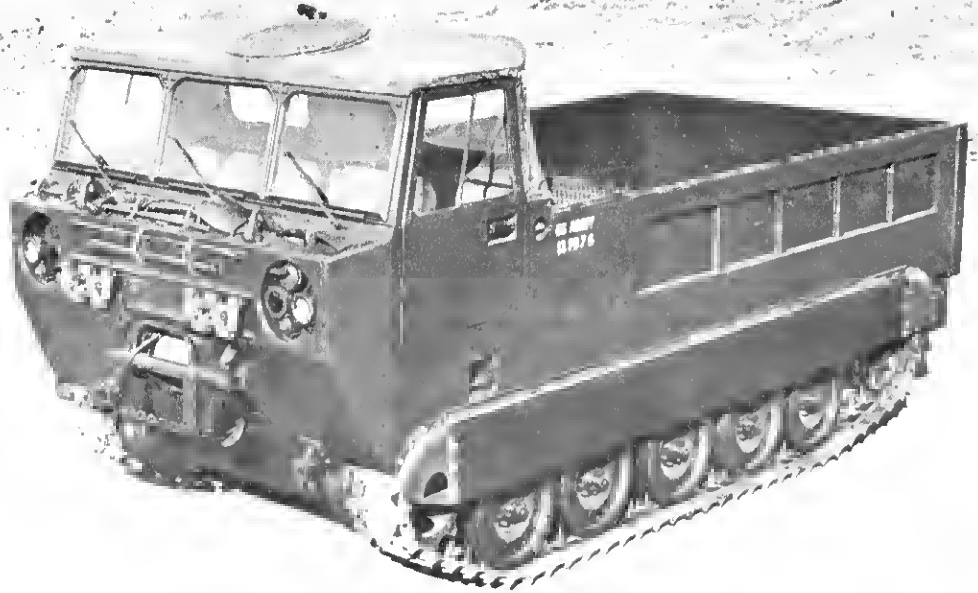
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AFV-G2 is printed in the United States. Application to mail at Second Class Postage rates is pending at La Puente, California 91747. Change of Address forms and undelivered copies should be forwarded to P. O. Box 293, La Puente, CA 91747.

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THE U.S. ARMY'S M-548 TRACKED CARGO CARRIER

by David R. Haugh



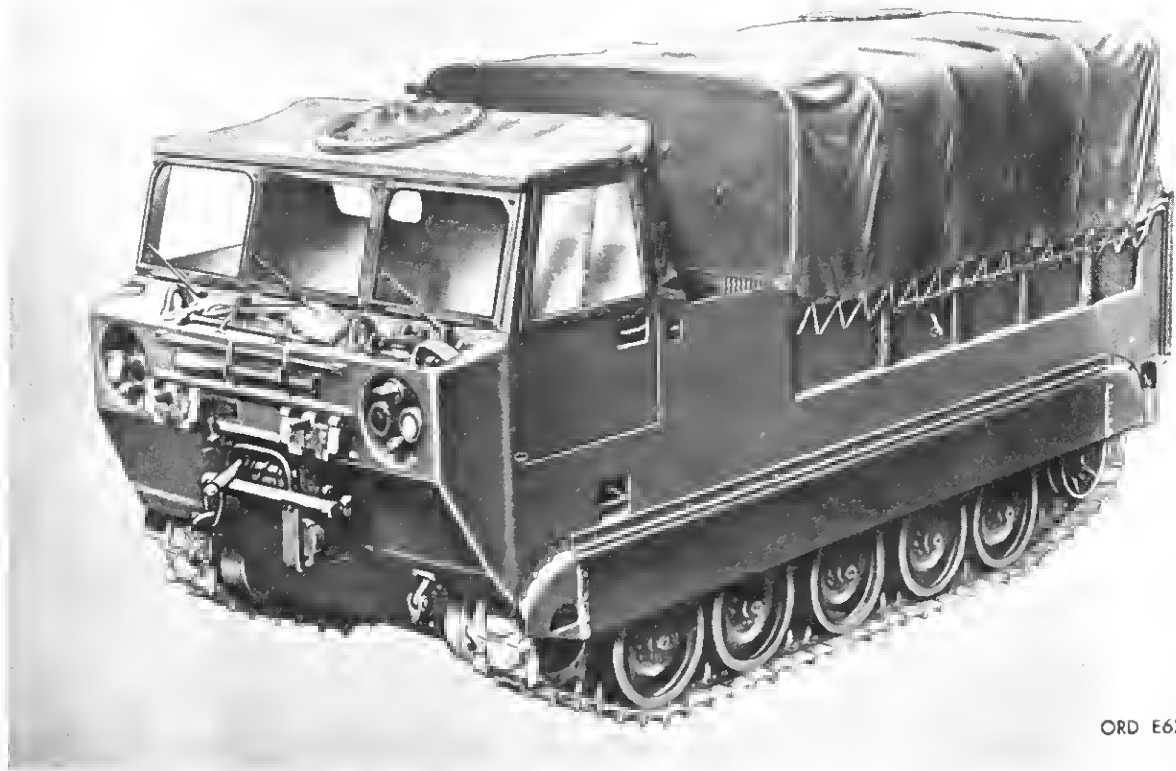
A member of the M113 Armored Personnel Carrier family of tracked vehicles, and utilizing a high percentage of interchangeable parts with that group, the M548 is an all-terrain, limited-amphibious vehicle, which, although un-armored, is meant to supplement the M113 in forward areas, and to replace it in rear areas as a supply vehicle.

Seating for four is provided in the cab, along with an M49A1 mount which will accept either a .50 caliber or a 7.62mm machine gun. A standard ordnance winch with 20,000 pounds of line pull is fitted at the front of the vehicle; this winch is driven mechanically from a power-take-off on the transmission. Standard tools and pioneer equipment is strapped to the front of the cab in a position that is easily accessible to the crew.

The M548 can carry a cargo of 6 tons over uneven and rough terrain. Access to the cargo area is provided by two rear tailgates, which are equipped with seals for watertight closure. The lower tailgate is hinged to lower downward, and the upper tailgate is hinged on both sides, so that it can be opened in either direction, or removed completely.

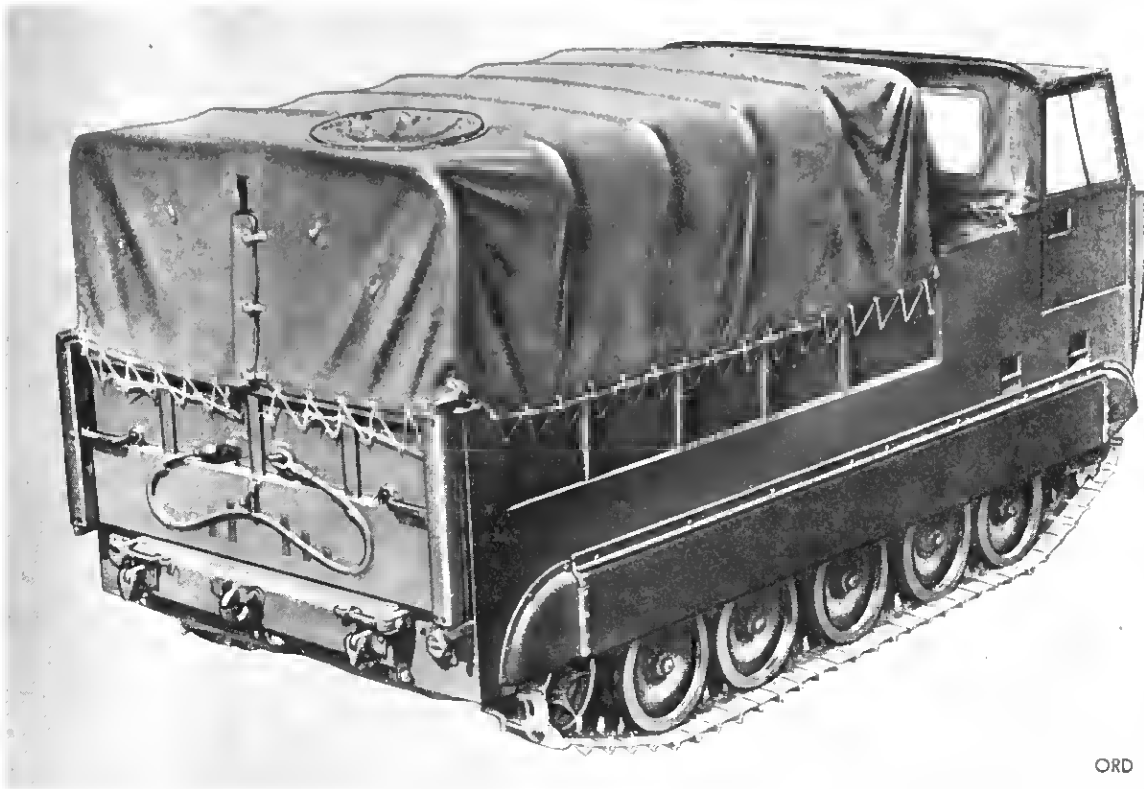
In addition to its general cargo carrying capability, the M548 is also utilized for several other roles; variants include an Ammunition Resupply Vehicle, which is a standard M548 equipped with a hoist and trolley for handling heavy items of ammunition; a Liquid Transporter, carrying standard ordnance liquid tanks and fuel dispensing units in the cargo bed; an Armored Supply Carrier, which has an open bed but uses an armored cab for driver and assistant driver/gunner (the gunner is provided with a turret-mounted 7.62mm machine gun); and several other vehicles that carry different numerical designations. These later vehicles will be described in the next issue of AFV-G2. In its normal supply configuration, the M548 has a cargo area that can be altered to carry troops or cargo. When in the high position (cargo), it offers a flat bed; when in the lower (personnel) position, the lowered center section of the bed offers leg room for sitting passengers.

With a vehicular weight of only 26,540 pounds (13 tons) and a 215 h.p. diesel engine, the M548 has an excellent speed exceeding 40 m.p.h. Its cargo carrying and rough terrain ability make the M548 an excellent choice for a forward area supply vehicle.



ORD E62265

An angled front-view of the M548 6-ton Cargo Carrier, showing the vehicle with all canvas erected and in place. This re-touched photo is taken from TM 9-2300-224-20, the maintenance manual covering the vehicle. Note the stowage for tools and the front-mounted winch. (Photo: U. S. Army)



ORD E62266

This right-rear photo shows the fastening system for the nylon top of the M548. With the rear (or tail) gate secured in the closed position, the vehicle cargo area is water-tight and the M548 is capable of swimming. The space between the cab and the cargo area is the location of the vehicular engine and cooling system. (Photo: U. S. Army)



M548 Cargo Carrier of the 1st Battalion, 84th Artillery in Vietnam in 1969. This photo shows the M49A1 .50 caliber machine gun mount. Note that all glass has been removed from the front windshield. The black "13" on a yellow circle shows the vehicle's bridge weight classification, while the winged eagle-like shell is the emblem of the artillery battalion.

(Photo: D. R. Haugh Collection)

An M548 Ammunition Resupply Vehicle transferring ammunition to an M110 Self-propelled 8" howitzer. Note the covered .50 caliber machine gun. The vehicles shown are from "D" Battery, 1st Bn, 84th Arty.

(Photo: D. R. Haugh Collection)

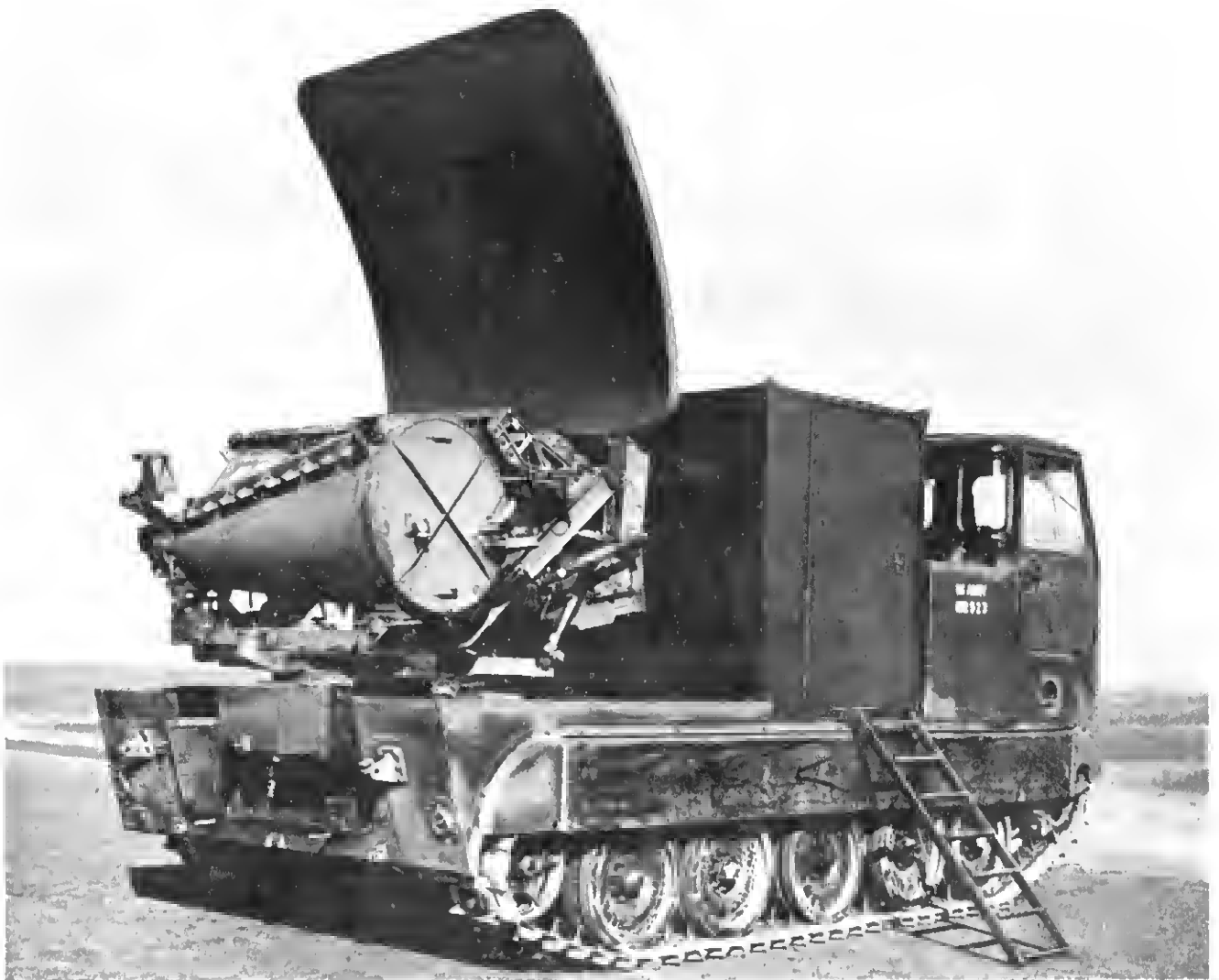


M548 Artillery Resupply Vehicle with 1500 lb. capacity hoist and trolley. The projectiles are for the 8" howitzer; those in the foreground are fuzed (ready for firing) while those in the rear still have lifting rings installed in the noses.

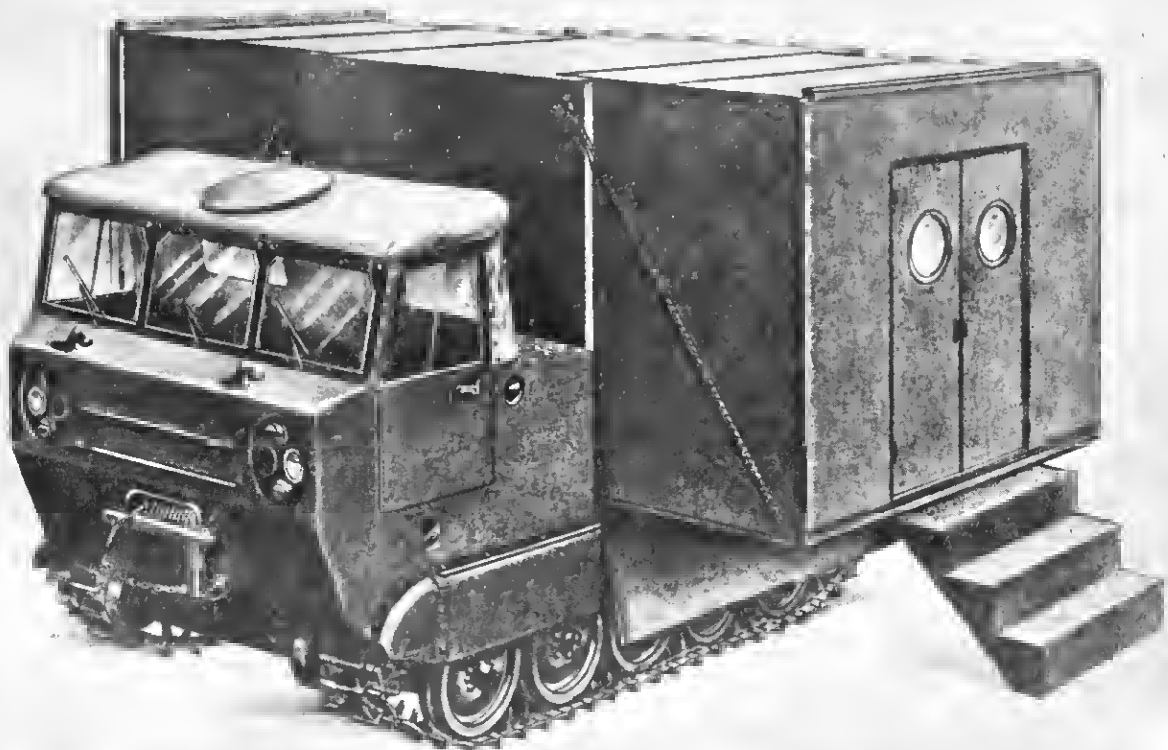
(Photo: D. R. Haugh Collection)

An amphibious forward-area Battle Dressing Station is easily obtained by mounting an expandable shelter on a slightly modified M548 Cargo Carrier. The vehicle is modified with the installation of downward-hinging sideboards which permit the expandable shelter to be moved outward to the full 12' by 18' size while still mounted on the vehicle. It is anticipated that this installation will greatly increase mobility of medical units. (Photo: FMC Corp.)



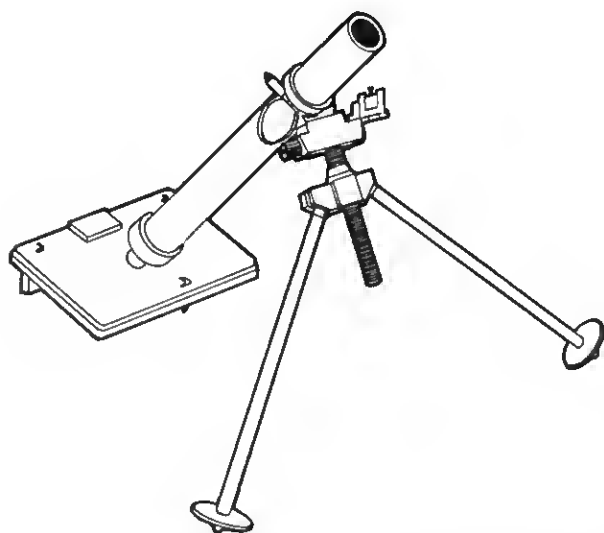


The above photo illustrates a preliminary mounting for an AN/MPQ-4A Radar System on one of the pilot models of the M548 vehicle, modified for the installation by the removal of the sides and tail gate. The large payload of the M548 makes such installations possible and practical, and the tracked carrier permits off-road mobility wherever required by the tactical situation. (Photo: FMC Corp.)



Modeling a German 8cm Mortar in 1:35th Scale

by Steven Eide



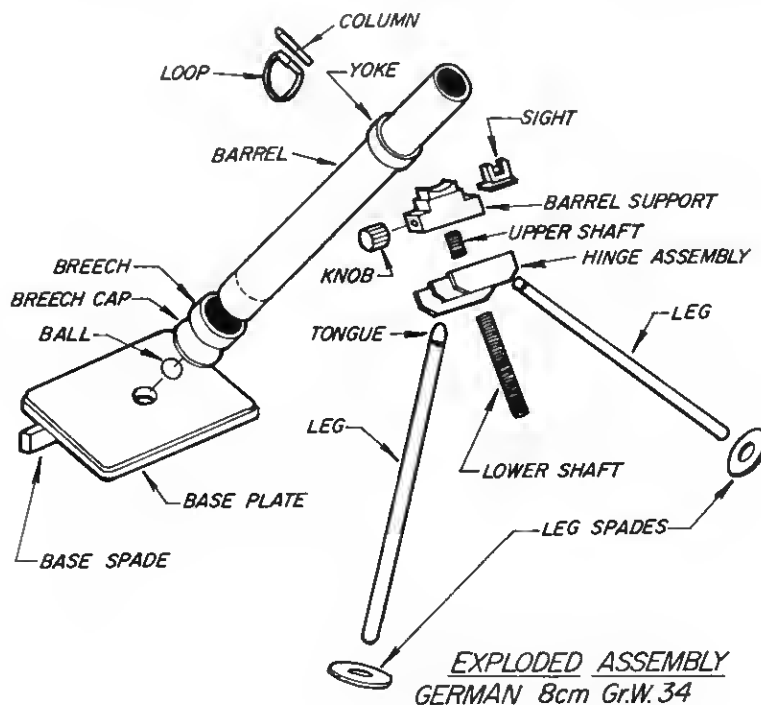
The German 8cm Granatenwerfer 34 was the standard heavy "grenade thrower" of the Wehrmacht during World War II. It was used in German "schwere" (or weapons) companies throughout the war, supplemented after 1942 by the 12cm mortar (in Panzer-Grenadier units) though not to any great extent in regular infantry units.

The 8cm Gr. W. 34 was actually 81.4mm in caliber; it weighed 125 pounds in action, and could be carried in three 40 pound loads, consisting of the baseplate unit, the barrel unit and the bipod assembly. The barrel was a simple smooth-bore tube, 3-1/16" across and 45 inches long. The 8cm Gr. W. 34 fired a 7.7 pound shell to ranges of 2,625 yards; shells provided included HE, Smoke, HE Rebound (discontinued in 1942), Target Indicating and Illumination (Flares).

Construction of a miniature 8cm Gr. W. 34 is begun by cutting a piece of brass tubing 1/8" in diameter to a length of 1-13/32". This piece becomes the barrel. The Breech piece is cut from 5/32" diameter tubing to a length of 3/32", and the cut piece is then fitted snugly over one end of the barrel and cemented in place. The breech end of the barrel is capped with a round piece of sheet plastic. Next, a piece of 5/32" brass tubing, 1/16" long, is cut for the bipod yoke; this yoke is pushed down over the barrel end opposite to the breech, and is cemented in place about 1/4 inch from the open end.

The Baseplate is cut from a piece of .040 inch sheet plastic, 9/16" by 9/16". Bevel the upper edges and round the corners and then drill a 1/16" hole in the center of the baseplate; this is the recepticle (socket) for the ball on the breech end of the barrel. A BB or shot gun pellet is ideal for the ball; this can now be cemented in place on the breech end of the barrel to complete the assembly.

The bipod is made from two pieces of stretched sprue, 1/16" in diameter and one inch in length. Flatten one end of each bipod leg in a pair of pliers to form a tongue measuring 1/16" by 1/16" and .030" thick. The other end of the legs can be slightly sharpened



to a point. The central hinge piece is made from two pieces of sheet plastic, .030 thick by 3/32" by 7/32", and one piece of sheet plastic .030 thick by 3/32" by 3/32". Sandwich the smaller piece of plastic in between the two larger pieces in assembly and file the cemented pieces to shape. The tongues of the legs are then fitted into the hinge piece. A fine-thread, self-tapping screw, 5/16" in diameter, minus the head, is used as the lower shaft; this is cemented to the bottom of the hinge piece at the center. Atop the hinge piece is cemented a 3/32" long piece of a 1/16" diameter screw (cut the same as the lower screw); this is cemented in place to form the upper extension of the elevating shaft.

Next, a support for the sight and elevating gear is made from 1/16" by 1/16" by 1/4" sheet plastic, filed to shape as shown in the exploded assembly. The top of this support is slightly concave to fit around the barrel yoke. On the right side of the support is the elevating knob, which is cut from stretched sprue; it is 1/16" in diameter and 1/16" in length. On the left side of the support is the mortar sight; this can easily be made from a cut-down model aircraft gun sight.

The mortar barrel assembly, baseplate assembly and hinge piece and barrel support are assembled as shown in the exploded assembly drawing, and allowed to dry. Later, add the loop and column behind the barrel yoke; this was used to assist in moving the mortar. Add the baseplate and leg spades as needed to fit the ground site (on a display base or a diorama) where the mortar is to be mounted. The mortar should be painted field-gray, with gun metal (or rub-and-buff) on the points of wear. This completes the assembly; however, a note on cement should be added. To avoid problems in glueing brass and plastic, you should use a good type of epoxy or a fast drying cement such as "Aron Alpha".

The ADMIRAL and the AFRIKAKORPS

BY WILLIAM E. PLATZ

Admiral Sir Walter Cowan, Bart., D. S. O., had first come to the North African desert a half-century before. Then he had served with the flotilla of Nile River gunboats and had been decorated for his exploits in the Sudan. Now he was back and eager for action. It was the summer of 1941, when he strolled into the Officer's Mess of the 18th Indian Cavalry Regiment. Tobruk was under siege and the 18th held the western face of the perimeter, but, the food was good and Sir Walter decided to stay. Having discovered a taste for Indian cooking, Sir Walter posted himself as "Naval Liaison Officer" to the cavalrymen and continued to serve in that capacity when the 18th was relieved and sent to the rear to refit.

In May of 1942, the 18th Cavalry returned to the front line as part of the revitalized 3rd Indian Motor Brigade; and, on the 24th of that month they were ordered to establish a "Brigade Box" at Point 171, some six miles southeast of Bir Hakeim. Here the Brigade Group was to cover the desert flank of the Gazala Line; and, in addition to the 18th Cavalry, it was composed of two other Motor Cavalry Regiments (2nd Lancers and the 11th (P. A. V. O.) Cavalry, an Artillery Regiment (2nd Indian Field Regiment) and a Field Company of the Sappers and Miners. A troop of 8 Bofors A.A. guns joined the Group on May 26th. A squadron of Valentine infantry tanks from 4th RTR had been dispatched from El Adem to support the Brigade, but it failed to arrive before the Axis attack. Admiral Cowan was still with the 18th, although there was little else of the Royal Navy in the area to maintain liaison with. However, in all other aspects, the cavalry was below establishment. There were only 4 anti-tank guns instead of 16, and the Carrier Platoon had been detached. The other two regiments were in a similar state of condition.

As dawn broke on May 26th, 1942, a large group of vehicles were concentrated about 2 miles to the southwest of the Brigade's position. These belonged to the Italian Ariete Division and the German 21. Panzer-Division, and with the light, they moved off eastward, unaware of the Indian's presence. At a range of 3,000 yards, the 2nd Field Regiment opened fire on the soft-skinned transport, scattering it. It was now 0640 hours. Faced with their first opposition, the Italians quickly organized an assault. At 0715, a group of some 60 M-13/40 tanks advanced on the western face of the "Box". When the hostile tanks came within 300 yards of the infantry positions, the 25-pounders switched from HE to solid shot. Almost immediately first one and then another of the tanks came to an abrupt halt. The bark of the 2-pounders was added to the roar of the field pieces, and more of the onrushing tanks erupted into clouds of black smoke. From among the slit trenches, Bren guns chattered, but the Italians came on.

As the first group of tanks passed through the box, a second wave approached from the southwest. This new threat included 200 additional armored vehicles, advancing on a wide front - and among the newcomers were the squat shapes of the Pz. Kpfw. III and IV's of 21. Panzer-Division. These tanks hit the perimeter of the Brigade and swept around the flanks to launch themselves on the rear of the position.

The Italian tankers conducted their assault with dash and tactical skill. As the M-13/40's closed in on the perimeter, fire from the dual Breda machine guns pinned the troopers in the slit trenches and swept the gunners from the anti-tank guns. Then, each troop of field guns was attacked in turn. But the British 25-pounder could be

Continued on Page 33

ARMOR in VIETNAM

Self-Propelled Heavy Artillery



In terms of Self-Propelled Artillery, the U.S. Army in Vietnam evolved into an organization that was dictated by terrain and mobility. Larger weapons (in caliber) were called for due to requirements for longer-range fire missions and the need for first round lethality. Smaller-caliber towed weapons were used almost in their entirety by the artillery units of the Army of the Republic of Vietnam (ARVN) and by air-mobile units of the U.S. Army; these lighter weapons could be easily transported to fire bases under the unit's transport helicopters. Conventional (i.e. those not air-mobile) replaced their 105mm caliber weapons with self-propelled heavier-caliber howitzers and guns which offered crew protection from enemy small-arms fire and had the required longer range.

Most of the standard artillery batteries were equipped with the 155mm M-109 self-propelled howitzer, as shown below and opposite. This vehicular weapons-system has been in U.S. Army use since 1962, and the vehicle has been adopted by at least nine other armies as their standard heavy artillery weapon. It fires a 95-pound (approximate) separate-loading projectile to ranges of approximately 14,700 meters, at a rate of 3 rounds per minute. This weapon is equipped with a characteristic large muzzle-brake/blast deflector which primarily serves to reduce recoil on the largely aluminum chassis. The large "chamber" on the barrel behind the muzzle-brake is a bore evacuator which exhausts the corrosive and toxic powder fumes from the barrel, chamber and vehicle crew compartment. In the photo immediately above, a M-109 from Battery A of the 1st Battalion, 84th Artillery is shown during a unit move. All of the crew except the vehicle driver are "perched" on the outside of the vehicle (away from the interior heat and noise) wearing steel helmets and carrying their M-16 rifles as protection against possible ambush or snipers. Note that almost all of the crew are wearing armored vests to provide protection against enemy fire. This photo was taken in the Mekong Delta area of South Vietnam, an area that was largely under Viet Cong control. The M-109 on the opposite page is shown shortly after going into a firing position, apparently while waiting for a fire mission. Most of the crew are dismounted, but all of the vehicular hatches are open for easy access when required. Note that the support for the gun tube (used while moving) has been disengaged; also note the propellant (powder bag) charge container on the ground (at the lower left of the photograph).

One battery of each artillery battalion in Vietnam was equipped with the M-110 self-propelled 8" howitzer. The vehicle on the opposite page is from Battery D of the 1st Battalion, 84th Artillery. The four guns of the battery were named "Destruction Part 1", "Part 2", etc.; taking the first letter of the name from the battery designation. The

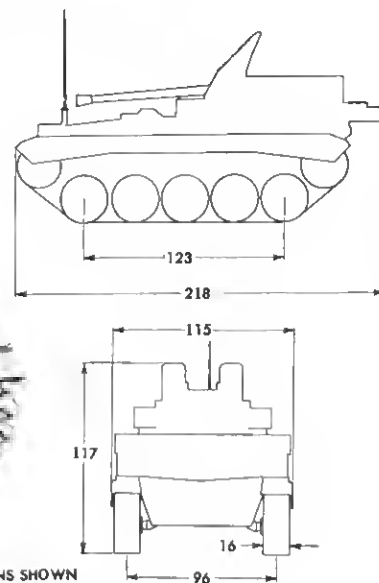
- Continued on Page 33 -



CARRIAGE, MOTOR, TWIN 40-MM GUN, M19A1



RA PD 137741



NOTE: ALL DIMENSIONS SHOWN
ARE IN INCHES

Technical Manuals: 9-761, 9-1718C, 9-1727K, 9-1729A, 9-1729B, 9-1726C, 9-1731D, 9-1825A, 9-1826A, 9-1828A; Supply Catalog: SNL G-248.

Classification: Standard.

Armament: Gun, dual, automatic, 40-mm, M2, turret mounted.

Ammunition: 350 rounds, 40-mm; 480 rounds, cal. .45, for submachine gun; 900 rounds, cal. .30 for carbines; 10 rifle grenades w/cartridge for carbine; 12 hand grenades.

Fire Control and Vision Devices: Periscope M13 or M6 (drivers); quadrant, gunner's M1; sight, computing, M13; system, local control, M16A1, or M16.

Communications: (AN/VRC-5) and (SCR-593 or AN/GRR-5); or (AN/VRC-8 or -9) and (AN/UIC-1) and (SCR-593 or AN/GRR-5).

Purpose: To provide a mobile anti-aircraft weapon.

GENERAL DATA

Crew.....	6
Weight, fighting.....	(lb) 41,165
Shipping dimensions, uncrated.....	(cu ft) 1,705; (sq ft) 175
Ground pressure.....	(psi) 10.1
Ground clearance.....	(in.) 16½
Pintle height, unloaded.....	(in.) 18½
Electrical system.....	(volts) 24
No. of batteries.....	(6-volt) 4
Type of ground.....	negative
Fuel octane rating.....	70
Capacities:	
Fuel.....	(gal) 110
Cooling system (2 systems).....	(each) (qt) 40
Crankcase, refill (each engine).....	(qt) 8
Auxiliary-engine crankcase, refill.....	(qt) 3½
Transmission.....	(each) (qt) 15
Differential.....	(qt) 20
Transfer.....	(qt) 4½
Final drive.....	(each) (qt) 2
Brakes.....	mechanical, controlled-differential
Parking brake, type.....	locking knobs on steering-brake levers
Transmission forward speeds.....	4
Gear ratio.....	High 1:1; 3d 1.55:1; Low 3.92:1
Transfer speeds.....	forward 2; reverse 1
Gear ratio.....	High 1.03:1; Low 2.34:1; Reverse 2.44:1
Differential-drive gear ratio.....	2.62:1
Final-drive gear ratio.....	2.94:1
Hull construction.....	welded homogeneous armor plate
Armor, Turret.....	Welded homogeneous armor plate.

PERFORMANCE

Maximum grade ability.....	(percent) 60
Turning radius.....	(ft) 50
Fording depth.....	(in.) 42
Maximum width of ditch vehicle can cross.....	(in.) 88
Maximum vertical obstacle vehicle can climb.....	(in.) 32
Fuel consumption (average conditions).....	(mpg) ¾
Cruising range (average conditions).....	(mi) 85
Allowable speed, recommended.....	(mph) 30
Maximum allowable towed load, gross.....	(lb) 10,000

ENGINE

Manufacturer: Cadillac.....	No. used 2; Model 44T24
Type.....	L-head, 4-cycle, No. of cylinders (90-deg V) 8
Displacement.....	(cu in.) 349
Bore.....	(in.) 3½
Stroke.....	(in.) 4½
Compression ratio.....	7.06:1
Governed speed.....	not governed
Brake horsepower (max w/std accessories).....	110 at (rpm) 3,400
Torque (max w/std accessories).....	240 lb-ft at (rpm) 1,200
Type of ignition.....	distributor

ADDITIONAL DATA

Auxiliary-generator engine..... Wisconsin Model TFG
Manual and power traversing and elevating mechanism.
Data given for vehicle equipped w/track, steel, T72. Track steel T72E1 is interchangeable. Track, rubber, T85E1 also applicable w/changed sprocket.

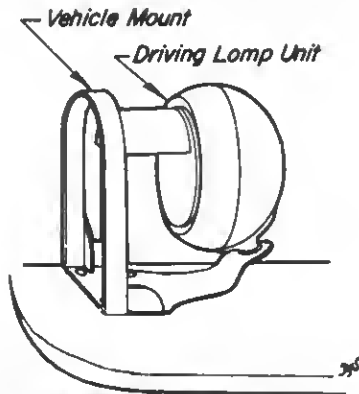
AFV INQUIRY

Armor Question from Readers, with
Answers from the AFV-G2 Staff.

Question: What did the World War II. U. S. Army "Blackout" vehicle lights look like? How did the Blackout light system work in principle?

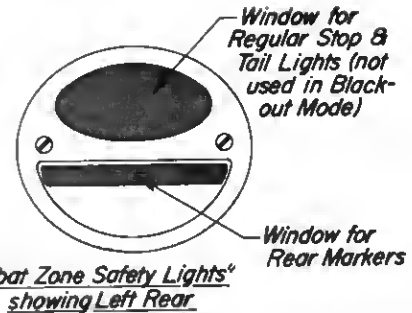
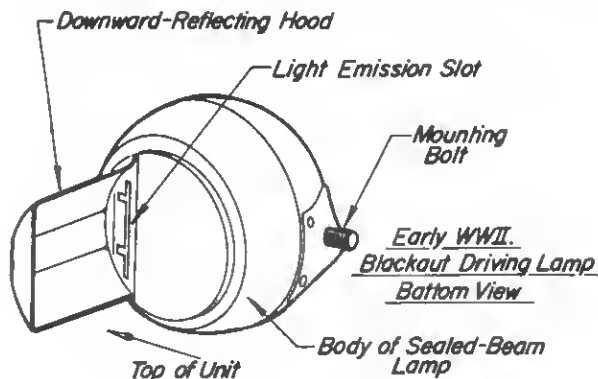
Answer: "Blackout" lights were designed to provide limited visibility for safe operation of a military vehicle under combat conditions where the enemy would be looking for vehicular lights, either from the air or from the ground. These lights were provided on military vehicles leaving the factories after March 1942; and "kits" were provided for retrofit to earlier vehicles.

The Blackout light system consisted of two different assemblies for different purposes; 1) the Driving



Typical Blackout Driving Lamp
Installation - 1/4 Ton 4x4.

Light, and 2) the Marker Lights. The Driving Light unit consisted of a small sealed-beam lamp, 4-3/8" in diameter that was fastened to the driver's side of the vehicle facing forward. The normal lens opening was completely closed except for a narrow slit at the top; this slit was shaded by a thin metal "hood" that prevented overhead observation of the projected light beam. The shape of the protective hood and the slit was designed so that the emitted light beam was defused on the ground in front of the vehicle; this beam covered a broad area and the hood prevented any observation of the light bulb itself. This lamp



was provided so that the driver could see obstacles.

The "Marker Lights" were more correctly termed "Combat Zone Safety Lights" and they combined regular stop and tail lights in the same housing as small paired lights shaped somewhat like cat's eyes. When the blackout system was in use, the regular head, tail and stop lights were turned-off, and the only visible lights to the rear of the vehicle were the paired "cat's eyes" on both sides of the rear. In addition, there was a marker light directed to the front; this light also consisted of a pair of "cat eyes". In operation, the rear marker lights provided a fairly accurate indicator of distance to the driver of a following vehicle. Depending upon the actual distance from the vehicle ahead, the driver would see four lights in pairs (indicating he was too close), a pair of lights (indicating he was following correctly), single light (indicating that he was too far behind); this visual phenomena is illustrated below.

In evaluating this visual system, it is interesting to note that the German Wehrmacht used a duplicate



Following Driver's View:
0 to 60 feet away-
TOO CLOSE!



Following Driver's View:
180 to 900 feet away-
SPEED-UP A LITTLE!



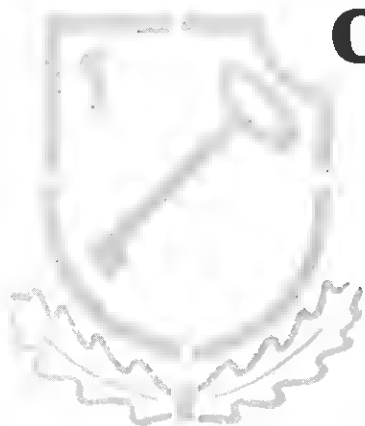
Following Driver's View:
60 to 180 feet away-
CORRECT DISTANCE.

system of blackout lights on military vehicles from 1942 until war's end. The identical system continues in use in the U.S. Army today, so it must be considered effective. Most military personnel who have had direct experience with this system can tell stories about the risks and problems they have encountered; our Editor sometimes mutters about following a column of armored personnel carriers on a pitch-dark night (no moon) through a driving rain storm, and stopping "by intuition" to find himself six inches from the front vehicle which was still totally invisible.....

TACTICAL MARKINGS of the WAFFEN-SS

Part 1.

by James Steuard



The subject of Waffen-SS tactical markings is one that this writer has avoided after an initial excursion into the subject a few years ago; I have avoided the subject because I did not feel that I had sufficient background and reference material. This article is a direct result of several letters and comments from friends and readers asking for material on the subject, and so I've been prompted (or pushed) into an attempt to detail Waffen-SS tactical markings. Due to the number of photos and drawings that I feel should (must) be included, it looks like this will be quite a lengthy series of articles. Part I. will concentrate on the "Leibstandarte-SS-Adolf Hitler" and units that were based (or evolved) from the 1. SS-Panzer-Division "LSSAH". Before I get started, I should perhaps explain that most of the markings information is based on careful screening of photographs (often with a magnifying glass) and then attempting to date and accurately locate the photo; this is an area of much confusion where errors are easy to make. To attempt to eliminate these, I have made reference to the divisional "Kriegstagebuecher" (KTB) or Battle Diaries (where pertinent and available) and also the "official" Schlacht-und-



Gefechts-Bezeichnungen (Battle and Positions Listings) to determine both locations and dates.

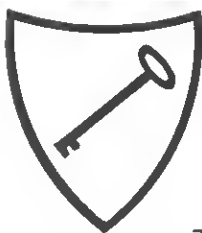
It appears that the first use of the "dietrich" (or skeleton-key) tactical marking for the LSSAH was in early 1941 when the former reinforced regiment was expanded into "SS-Division (mot.) LSSAH". The earliest photos that I have found to show the tactical marking were taken during the Balkans campaign in April 1941; the picture at the lower left shows a vehicle from SS-Regiment 1. being pushed back on the road near Klidi Pass in Greece. Note that the regimental number appears above the tactical marking. At this period of time, there existed a good many variants of the basic shield-and-key. All markings appear to have been hand-painted (without the aid of stencils). The drawing at lower left shows the tactical marking as it appeared on a Kfz.15 medium car of the divisional reconnaissance battalion; in this case, no number appeared above the marking, but the company number (a "3") was painted below and to the right of the shield. The photograph above shows a motorcycle column (probably from the Aufklärungs-Abteilung) on a road in Greece. Note the break in the loop of the key.

This writer has found only three (rather poor) photos showing the LSSAH tactical marking during the initial attack into Russia (in the summer of 1941); all illustrate the shield-and-key in a more standardized (?) form, ie. with cutout at upper right and a more squarish shape to the shield; again, however, the three photos examined show what looks like hand-painted symbols.

In 1942, the appearance of the LSSAH tactical marking changed; this quite possibly is due to the redesignation and alteration of the division into SS-Panzer-Grenadier-Division LSSAH. The markings first appear in the new form in photos that can be dated from the battles



*Tactical Symbol - SS Division
(mot.) LSSAH, April 1941;
drawing from photo of a
Kfz.15 of 3./SS-A.A.1*



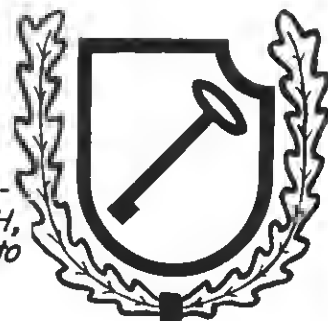
*Tactical Symbol-SS Division
(mot.) LSSAH, Autumn of
1941; drawing from a
photo of a Sd.Kfz. 222
of SS-Aufkl. Abt.1*



in and around Charkov in the early part of 1943. This new symbol variant had crossed oakleaves beneath the shield; these crossed leaves extended slightly beyond the sides of the shield. During the Charkov fighting, the symbol was generally applied in stencil form, in white on the dark vehicle base paint. When used, white vehicular camouflage paint was applied to the vehicle so that the original symbol was left on a patch of dark background. In some cases, the broken areas of the stencil were carefully filled-in so that the shield appeared as a solid outline. The tactical symbol as used by the two Panzer-Grenadier-Regimenter differed in that either a number "1" or a "2" was added in the upper left corner of the shield; this number identified the particular regiment. With no further changes, this symbol remained in use by the 1.SS-Panzer-Division "LSSAH" until war's end. The

photograph at lower left illustrates a medium car of the divisional Kriegsberichter-Zug (War Reporter Platoon) in a rather famous setting; this photo was taken during the autumn of 1943 when the division acted as security in northern Italy.

A slightly different variation, which appeared but briefly, should be mentioned. This variation had the crossed oakleaves, however they extended up the sides of the shield so as to practically surround it, as illustrated below. This variation appeared publically during a Paris parade during the fall of 1942 when the division was in the process of reforming and training. Quite possibly this symbol variation was just a preliminary step leading to the standard marking.



*Tactical Symbol- SS Panzer-
Grenadier-Division "LSSAH",
August 1942; from a photo
of a Pz.Kpfw.IV. of 3/
SS-Pz.Rgt.1*

In the summer of 1943, a good many of the younger officers and non-commissioned officers of the "LSSAH" were detached from the division to serve as the cadre of a new division, which was to be composed of Hitler Youth members. This division was, of course, the 12. SS-Panzer-Division "Hitlerjugend" (although initially designated "Panzer-Grenadier") and through most of its existence, it served as the Leibstandarte's "sister" division (in the same Panzer-Korps). As can be easily seen, the divisional tactical symbol was a combination of the markings of the "LSSAH" and the Hitler Youth. On all but one of the photographs examined, the "Hitlerjugend" shield has a shape reminiscent of the early "LSSAH" shield with a point at the bottom and with curved sides. The white single "Seigrune" was an insignia of the Jungvolk (junior Hitler Youth) and was also in use by the "HJ"



*Tactical Symbol- SS Panzer-
Grenadier-Division "LSSAH",
February 1943; from a
photo of a Pz.Kpfw.IV. of
6./SS-Pz.Rgt.1*



and the "dietrich" (key) illustrates the close connections between the 12. SS-Panzer-Division "Hitlerjugend" and the "LSSAH". The rather-poor photograph above shows the tactical marking displayed on the front of a messenger's

BMW motorcycle, carrying the divisional commander, SS-Gruppenführer Fritz Witt, who was later killed during the fighting in Normandy. Note that the tactical marking's "oak leaves" as shown in the photo and the illustration below are a variant of those shown for the "LSSAH". This variation has also been observed in the "LSSAH" divisional tactical markings.

In the latter part of 1943, a Corps Headquarters was formed under command of SS-Oberstgruppenführer Sepp Dietrich, who was promoted to the new command



Tactical Symbol- 12.SS-Panzer-Division "Hitlerjugend," June 1944; from a photo of a Pz. Kpfw.IV. of 6./SS-Pz. Rgt.12

from the 1.SS-Panzer-Division "LSSAH". The new command was designated as the "Generalkommando, I. SS-Panzer-Korps" and was awarded the title of "Leibstandarte-SS-Adolf Hitler" since it would serve as the higher headquarters over the division of the same name, under the command of the officer who traditionally commanded the "bodyguard" of the Führer, Adolf Hitler. (Incidentally, this new corps headquarters should not be confused with the "Generalkommando, SS-Panzer-Korps" that commanded the three SS-Divisionen that fought at Charkov and at Kursk, in 1943.)

In common with virtually all corps in the German Wehrmacht, the 1.SS-Panzer-Korps "LSSAH" was provided with corps-level units that were available to support operations of the divisions under the corps control. These units were assigned the numbers of the corps (in this case "1") added to one-hundred; this scheme was later changed and the corps number was added to five-hundred. These corps-level units included a heavy Tank Battalion, a Signal Battalion, a Rocket Projector Battalion as well as a Supply unit.

Probably the most famous of the corps-level units was "schwere-SS-Panzer-Abteilung 501." (or SS Heavy Tank Battalion 501) which was equipped with the potent Pz.Kpfw.VI. "Tiger" tank, and which contained numerous "tank aces" including SS-Obersturmführer Michel Wittmann (who commanded the 2.Kompanie). Most of the photographs identified and examined that carry the corps tactical marking are from this famous unit; only one photograph has been examined that could possibly be

from another unit of the Corps (and this appeared on an amphibious "Schwimmwagen" that could well be from the same schwere-SS-Panzer-Abteilung 501.)

The tactical marking of the 1.SS-Panzer-Korps "LSSAH" consisted of the squarish-shield as used by the 1.SS-Division (as contrasted to the more pointed type of the "Hitlerjugend" division), with a solid outline on all of the examples so far discovered. Typical "oak leaves" appeared under the shield; no photographic evidence has been found to verify the existence of crossed swords beneath the oak leaves (as suggested in Volume II. of Bender-Taylor's books on the Waffen-SS). Within the shield, the tactical marking of the 1.SS-Panzer-Korps carried two crossed skeleton-keys, as illustrated below. This marking thus carried on the "diétrich" marking tradition established in 1941 for the "LSSAH" division. The drawing below shows the marking as it appeared on all of the examples that were analyzed.



Tactical Symbol- 1. SS-Panzer-Korps "LSSAH," May 1944; from a photo of a Tiger I. heavy tank of 2./SS-Pz.Abt.501

This concludes Part I. of this article series, which will continue next month with coverage of three more Waffen-SS units. In compiling the information necessary for this article, assistance was obtained from numerous sources, and special thanks must be given to the following individuals and organizations.

E. A. Bartetzko
R. J. Bender
R. E. Deeter
M. A. Hundley
H. P. Taylor
Bundesarchiv, Koblenz, Germany
HIAG, Osnabrück, Germany
Hoover Memorial Library, Palo Alto, Calif.
Imperial War Museum, London, England
Munin Verlag, Osnabrück, Germany
National Archives, Washington, D. C.
Plesse Verlag, Göttingen, Germany
Schild Verlag, Munich, Germany
Vorwinckel Verlag, Neckargemünd, Germany

As in the past several issues, AFV-G2 is continuing to present the first complete illustrated history of the Armored Fighting Vehicles of the Italian Army. Authored by Dr. Nicola Pignato, a widely-known historian on the Armed Forces of Italy, this serialized book is available only to readers of AFV-G2. The portion of the book in this issue will be found at the center of the magazine, between pages 18 and 19, bound in with the regular pages. To remove the center supplemental sheet in this issue, use a razor blade or sharp knife to carefully slit between the staple holes in the sheet, which will then be free of the magazine. Readers may then punch the supplemental sheets with a three-ring binder punch and install them in a separate binder. When placed together with the other supplemental sheets from AFV-G2, the complete series will present a detailed history of all Italian armored vehicles, with numerous previously-unpublished photographs and 1:50th scale drawings. The sheets are separately numbered for ease of binding, and at the end of the publication, a complete index and table-of-contents will also be furnished to readers in order to complete the book.

The Japanese Type 95 Light Tank

First produced in 1935, the Japanese Type 95 Light Tank was to become the "standard" light tank of the Japanese Army during the second world war. Largely un-modified and unimproved during its service life, the Type 95 "Kyu-Go" was easily obsolete by 1941 and it proved to be totally inadequate against any form of tank or anti-tank opposition.

In 1935, at the time of its inception, however, the "Kyu-Go" was more than comparable to the light tanks of other nations. Various authors, in discussing Japanese armored equipment of the thirties, have made belittling comments, such as, "Japanese tank development was both lethargic and uninspired...". In comparison with contemporary vehicles, however, the standard Japanese armored vehicles, in reality, do not appear sub-standard or inferior, but show some factors which indicate that armored vehicle designers in Japan were generally equal to those found in the leading nations of Europe or the Western Hemisphere.

To better illustrate this viewpoint, the comparative table below shows standard data for the U.S. Army M2A1 Light Tank, the British Mk. VI. Light Tank and the German Panzer Ib, all of which were coming into service use at roughly the same time in 1935.

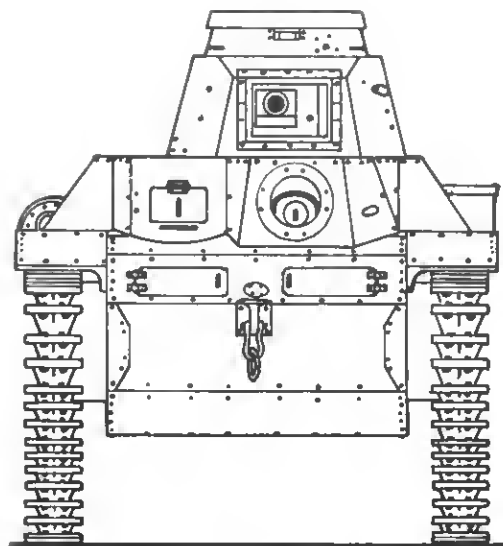
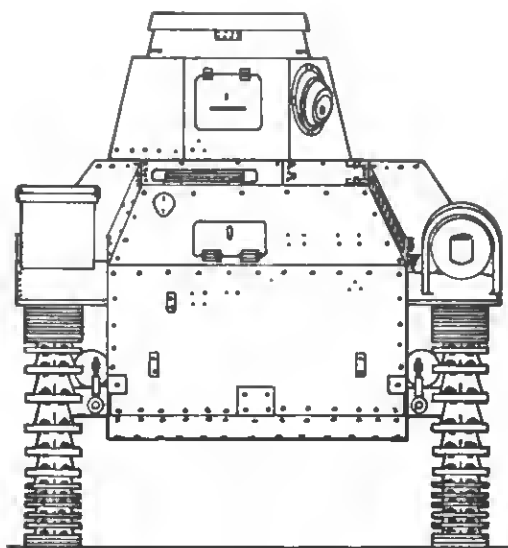
Comparative Data Table: Light Tanks of 1935

Designation:	<u>U.S. Army</u> Light Tank M2A1 (M2A2 & M2A3 Similar)	<u>British</u> Tank. Light, Mk. VI.	<u>German</u> Pz. Kpfw. Ib. Sd. Kfz. 101	<u>Japanese</u> Type 95 Light Tank "Kyu-Go"
Crew:	Four (4)	Three (3)	Two (2)	Three (3)
Combat Weight:	18,790 lbs.	10,800 lbs.	11,600 lbs.	16,800 lbs.
Armament: Main: Secondary:	One (1) - .50 caliber MG Two (2) - .30 caliber MG's	One (1) - Vickers .5 cal. MG One (1) - Vickers .303 cal. MG	Two (2) - 7.9mm MG34 MG's	One (1) - 37mm Gun Two (2) - 7.7mm caliber MG's
Armor Thickness: Max: Min:	16mm 6mm	14mm 4mm	13mm 7mm	12mm 6mm
Engine Type:	Continental W-670 7-cylinder Radial (aircraft type)	Meadows 6-cylinder In-line	Maybach NL38TR 6-cylinder In-line	Air-cooled 6-cylinder, In-line Diesel
Horsepower:	250 HP	88 HP	100 HP	110 HP
Fuel Type:	High-octane Gasoline	Gasoline	Gasoline	Diesel Fuel
Speed: Max: Cross-Country:	30 m. p. h. 18 m. p. h.	35 m. p. h. 25 m. p. h.	25 m. p. h. 16 m. p. h.	28 m. p. h.
Radius of Action (Range):	130 miles	130 miles	90 miles	151 miles

While Japanese tanks have often been criticized for a lack of armor protection, it is interesting to note that the Type 95 compares favorably with these contemporary vehicles, and even surpasses the British Mk. VI. in this category. In reality, the differences of one or two millimeters in armor protection are so slight as to be ignored. In the case of armament, the Japanese light tank was actually far superior to the other tanks listed; it was the only light tank of the four to mount a cannon! Every other nation, including the Germans, preferred lighter machine-gun armament.

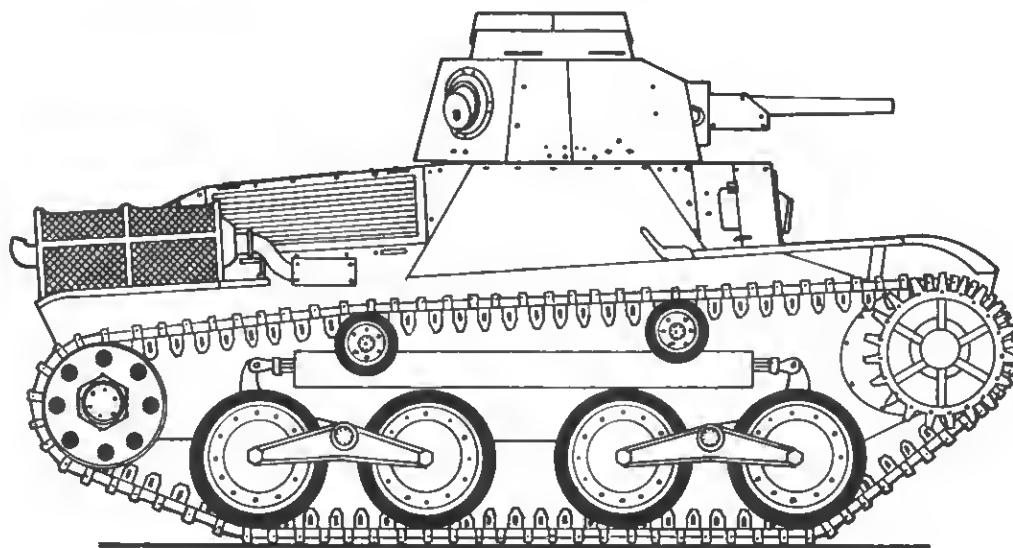
It is in the power-plant category that the Japanese took a lead over other nations. While the Americans were considering modified aircraft engines (which were relatively complicated), and the British and Germans were using typical 1930's automobile engines, the Japanese initiated the use of low-r.p.m., simple, rugged diesel-type engines which gave excellent performance and reliability in the hands of un-skilled mechanics. Undoubtedly, Japanese designers had also considered the advantages of diesel fuel over gasoline. With its lower evaporation rate (which gives longer storage life of fuel), diesel fuel is less flammable (over gasoline which has an explosive potential). In cases of economy, diesel fuel is cheaper and provides better mileage, and is better suited to armor operations in hot, high-humidity areas, where the Japanese Army could expect to operate.

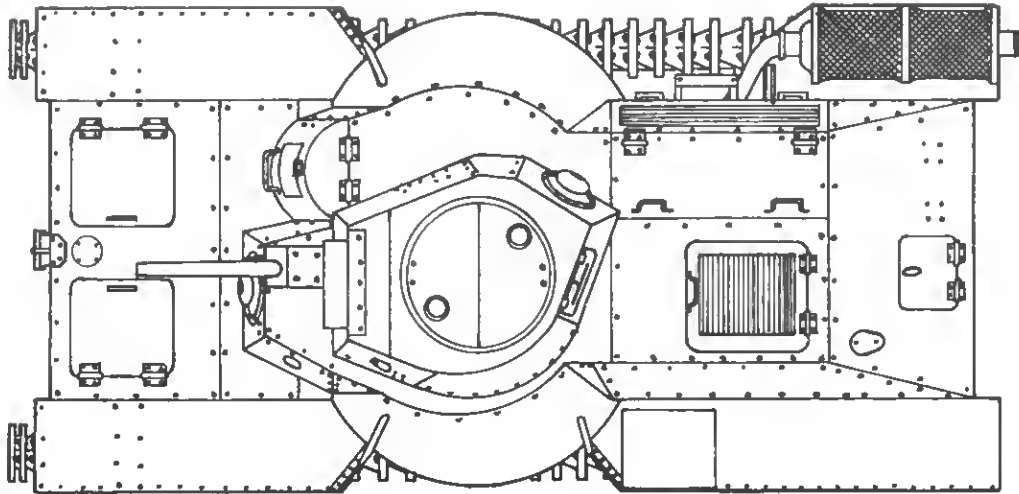
It should not be assumed from the above comments that the Japanese Type 95 Light Tank was superior to other nation's light tanks. There were numerous shortcomings in the vehicle, just as there were shortcomings in the M2A1 or the Panzer Ib. In the aspect of crew members duties, for example, the Japanese tank commander was probably the most over-worked soldier in the Japanese Army! In addition to carrying-out operational command over his tank (and possibly other vehicles), the commander had to assist the driver by "conning" the tank via a speaking tube. This was necessary due to the extremely limited visibility of the driver. The tank commander also acted as both gunner and loader for the two turret weapons; in and around all these jobs, he also served as



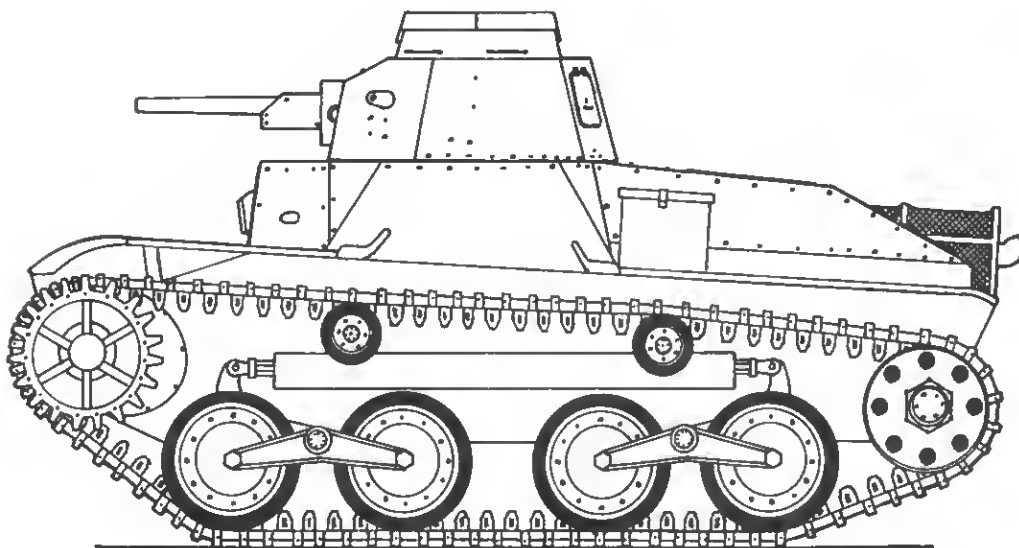
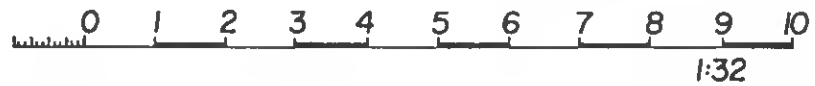
The Japanese Type 95 Light Tank

Kyu-Go



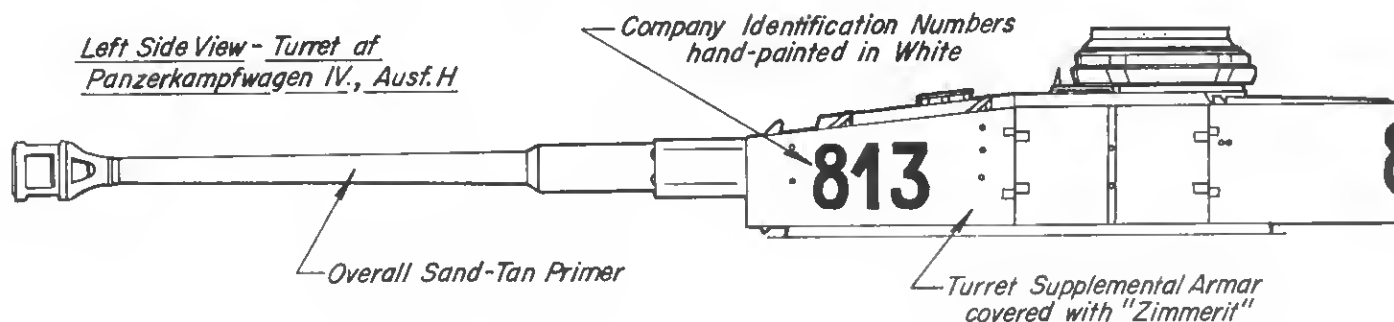


DRAWN BY: STEVEN R. COBB
SCALE: 1/32 (3/8" = 1'-0")



COLOR 'N CAMOUFLAGE

The German Panzer IV. Anzio, 1944



by James Steuard

The subject of this article is a Panzerkampfwagen IV., Ausführung H, as seen in operation against the Allied beachhead at Anzio-Nettuno in February of 1944. The vehicle was assigned to the First Platoon (1. Zug) of the 8. Kompanie of Panzer-Regiment 26., a component unit of the 26. Panzer-Division. At the time that the medium tank was pictured, it was serving as a part of the attached armor for the 3. Panzer-Grenadier-Division, in this unit's attack on the Factory (to reduce the British salient into the German lines); this attack took place on 10-11 February.

It is obvious from the source photographs of this vehicle that it is virtually new condition. The side skirting armor plates (schürzen) had been removed from the hull mounting brackets, to permit the "mounted" infantry to more easily dismount from the tank, and to permit easier maintenance since the vehicle was operating in winter mud that was quite viscous and thick. The turret supplemental armor was more permanent on the Panzer IV, and had not been removed. The hull and turret of the tank were liberally covered with "Zimmerit" anti-magnetic paste; this was a standard feature of German tanks of this period of the war, the paste being applied at the factory during manufacture. Over this application of "Zimmerit", the Panzer IV, carried a coat of the standard factory paint finish; this was a dark sand-tan color that blended-in well with the surrounding terrain of the Italian coastline. Our paint chip below illustrates this color, as mixed with Pactra paints (a change from our previous paint due to requests from readers).

The markings on the Panzer IV.'s turret supplemental armor consisted of the three-digit company recognition numbers that were typically used on German armor during the war. These numbers were painted by hand in white paint with no outlining; the numbers "813" indicated that the tank was the third vehicle in the First Platoon of the 8th Company of the Regiment. It is interesting to note that the number "3" had a flat top that was not standardized to any degree. The three-digit numbers were applied to both sides of the tank near the front (forward of the escape doors) and on the rear, to provide instant recognition from all directions except the front.

One of the factors that indicates that the Panzer IV. was nearly-new when illustrated was the fact that the tank's chassis (or serial) number was still visible on the front of the hull. This number appeared to the immediate left of the hull ball-mount machine gun; it was painted in approximately 1-1/2" high numbers in black paint. Our particular Panzer IV. carried the chassis number "85384". With the rough treatment given to any vehicle in combat, it can be appreciated that the chassis number would soon wear-off, or be covered with camouflage or touch-up paint.

The divisional tactical marking was also painted on the front of the hull; this marking was applied to the right of the driver's visor, as shown in the front view on the opposite page. This marking consisted of an approximate 4-1/2" black square with a head and hat of a 19th Century German soldier applied on the square in white paint in "outline" style, as shown on the opposite page. This symbol appears to be one of many "head and hat" variations that were used by the 26. Panzer-Division on its vehicles; the head and hat was adopted by the division to illustrate the locale that many of the division's members were recruited from. This symbol quite commonly appeared on Meissen china as a "trademark" and the 26. Panzer-Division had the nick

GERMAN SAND-TAN PRIMER

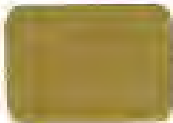
5 pts Pactra M17 Khaki
2 pts Pactra M18 Lt. Earth

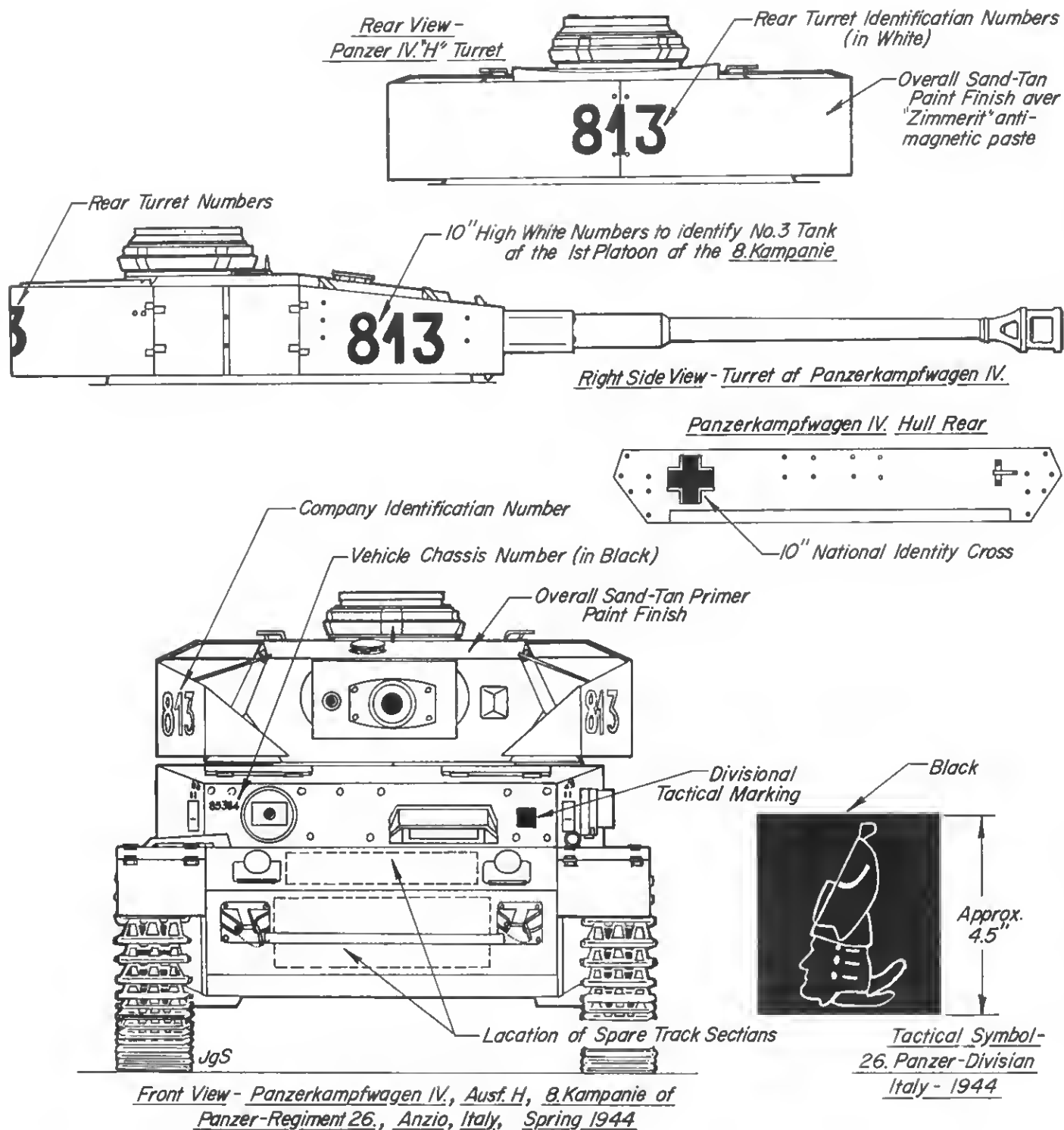


GERMAN
SAND-TAN PRIMER

5 pts Pactra M17 Khaki

2 pts Pactra M18 Lt. Earth





name "Meissen-Soldaten" applied to its members.

On the rear of the tank, on the trapazoid shaped rear plate, appeared a German national identity "cross"; this was the only cross to appear on the tank and it can be imagined that the original crosses appeared on the missing side skirt armor plates. The cross on the rear of the hull had a thin white outline, apparently to limit visibility in periods of darkness.

A few other notes on the Panzer IV, might be of interest. Since it was the early part of the year, and therefore quite chilly, the tank crew members were wearing the normal feld-grau winter overcoat over their black tank uniforms. The infantrymen riding on the rear deck of the tank were similarly dressed to keep warm. Judging by the amount of mud splattered and splashed over the vehicle, the infantrymen obviously didn't wipe their feet when mounting (!) and in some areas, the original sand-tan paint is quite hidden beneath a coat of Anzio mud. Additional details include a sort of camouflage net rolled over the frontal spare tracks and the lack of an anti-aircraft MG.

ARMOR IN PICTURES

"Armor in Pictures" is a photographic-article series to display reader submitted material on military vehicles and associated models or dioramas. Readers are invited to submit their photographs of vehicles for inclusion in AFV-G2. Photos should be packed securely, preferably between sheets of cardboard, to prevent folding, and sent to AFV-G2, P. O. Box 293, La Puente, CA 91747, Attn: "Armor in Pictures". Credit will be given in the photo caption for all photos published and all photos will be returned after publication, along with a copy of the magazine in which the photo appears.

"Armor in Pictures" is also designed to serve readers as a forum for photo requests. If there's a particular photo reference needed, for modeling, for data, for accurate markings, or for any one of a million reasons, drop AFV-G2 a note (at the above address) to let the staff know what is required. Our staff will attempt to provide the photos that readers wish to see, and will also provide a listing of the requested photos that are being searched for.



Above: This unusual photograph shows the last British troops leaving Port Said, Egypt at the conclusion of the 1956 French-British occupation of the Suez Canal area. This withdrawal took place on December 22, 1956 and the vehicles shown being backed onto the Landing Ship are from the 6th Royal Tank Regiment. Note the white-washed recognition markings applied to the turret tops to provide for Allied air recognition; also the rather faint regimental marking on the lower hull front of the tank in the foreground. This photo was supplied by John A. Loop of Reno, Nevada.



Right: Here's one for readers who like a contest. What is it? The photo was submitted by Jerry Read of Los Angeles, California, who found the photo in a 1939 magazine. Can any reader supply an identification for this armed armored car (or truck)? We'll print the answer in the next issue of AFV-G2.....



Left: An abandoned Soviet BT-7 fast tank, as found by the advancing German troops during the invasion of the Soviet Union in 1941. Many vehicles were simply left by their crews who were outpaced and out-thought by the rapid German advance. The BT-7 appears to be in good external condition. Our photo was submitted by Kurt Fischer, one of our regular contributors.

Right: In case you've ever wondered if there is a German Sd. Kfz. 222 series light armored car in existence somewhere in the world, here it is. This photo, submitted by Sam von Schriltz of Indianapolis, Indiana, shows the Sd. Kfz. 221 of the Patton Museum, Fort Knox, Kentucky. The vehicle is shown under temporary outdoor storage before completion of the new museum facilities; it is understood that the museum now has funds to totally restore this vehicle, which certainly looks as though it needs restoration.



German

'Panzer-Aufklärungs'

Armored Reconnaissance Units

PART 1

by James Steuard

The birth of "Panzer", or Armored, Reconnaissance units in the German Wehrmacht came with the creation and organization of the 1943 type Panzer-Division. Prior to this mid-war re-organization, divisional "Aufklärungs" (Reconnaissance) units were either motorized with a mixture of light armored cars and motorcycles with sidecars or were "Kradschützen" battalions completely equipped with the heavy sidecar-equipped motorcycles. In practice, these units could not effectively deal with an armored or heavily armed opposition: they lacked direct-fire heavy support weapons and did not possess vehicles with sufficient cross country mobility and armored crew protection.

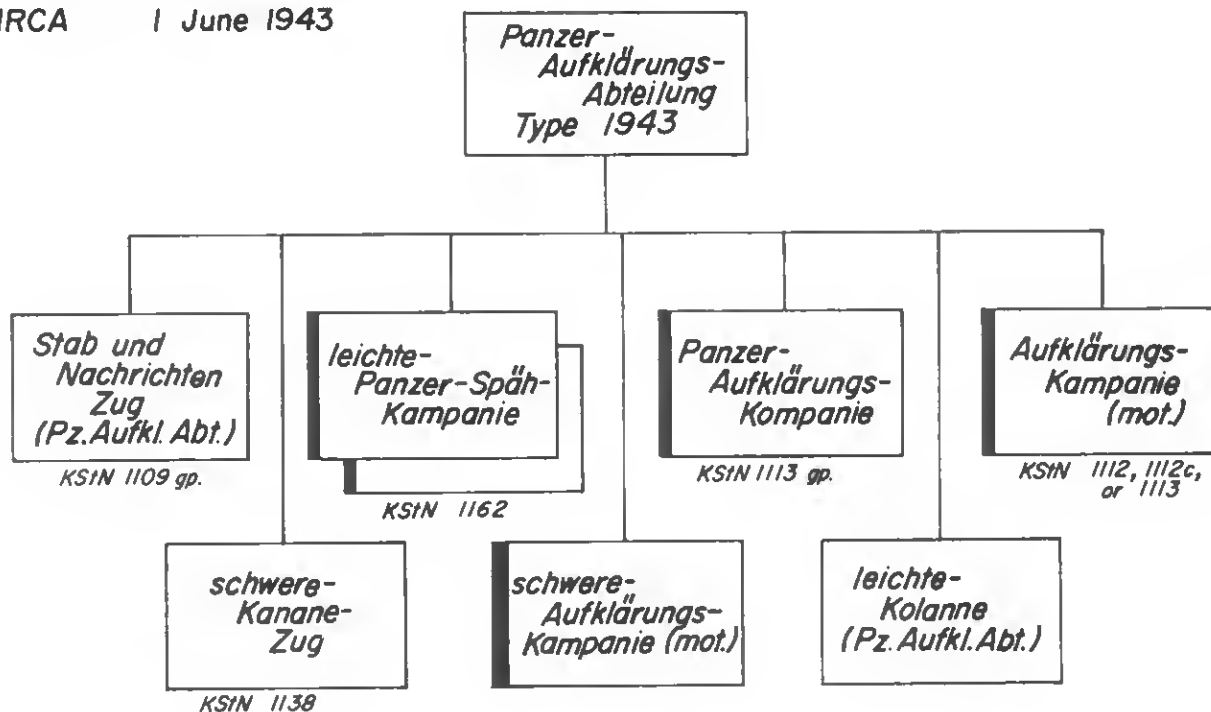
The first major change in "Aufklärungs" units as they were reorganized was the almost total deletion of the motorcycle as a reconnaissance vehicle. While the heavy sidecar-equipped motorcycle (the BMW R75 or Zündapp KS750) was to remain in German Army service until the war's end, all of this later service was in a messenger or communications role. The heavy sidecar-equipped motorcycles lacked sufficient range and could

carry little in the way of a practical load; most provided cramped quarters for three men, who existed with almost no protection from the weather and who could carry little besides their weapons and ammunition. The motorcycles had limited off road mobility and had proven to be totally inadequate on the Eastern front by late 1942.

The reorganization and creation of the Panzer-Aufklärungs-Abteilung in 1943 created a battalion-sized unit that was large (with five "line" companies) and well balanced for combat in either offensive (reconnaissance) or defensive (armored reserve) roles. As shown below, the battalion had two leichte-Panzer-späh-Kompanien, which were equipped with both light armored cars (typically the Sd.Kfz. 222) for reconnaissance missions and heavy eight-wheeled armored cars for communications purposes. These two units were "hold-overs" from the earlier motorized Aufklärungs-Abteilung. Next came a Panzer-Aufklärungs-Kompanie equipped with the light Sd.Kfz. 250/1 armored halftrack, which provided the battalion with an excellent cross country armored reconnaissance vehicle. The battalion also had an Aufklärungs-

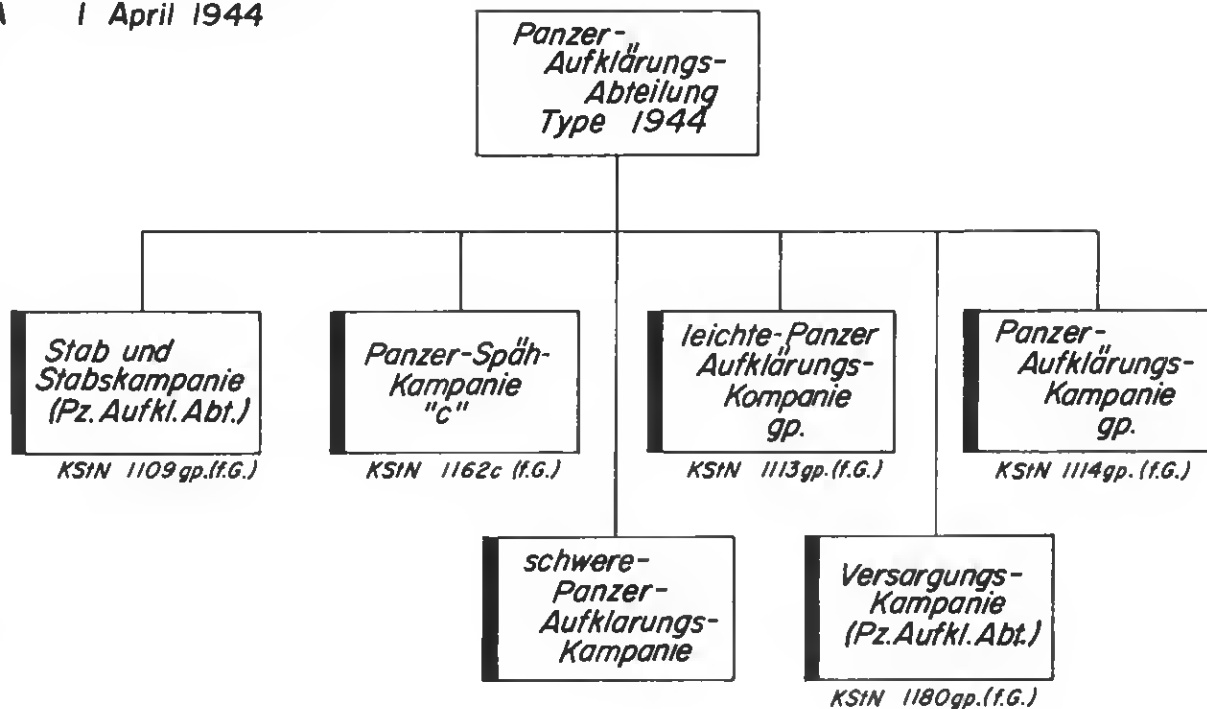
PANZER- AUFKLÄRUNGS- ABTEILUNG

CIRCA 1 June 1943



PANZER- AUFKLÄRUNGS- ABTEILUNG

CIRCA 1 April 1944



Kompanie (mot.) which could be organized and equipped in three different ways depending upon the terrain (and the front) where the division was employed. This company could be equipped with either the Volkswagen Kübelwagen (KStN 1113), the tracked motorcycle (Kettenkrad) KStN 1112c) or the standard heavy motorcycle with side-car (KStN 1112) as a "hold-over" from the earlier organization. The motorcycle equipped company was provided for employment in areas with good road-nets where the limited cross-country mobility would not prove to be a hindrance. The battalion was also provided with a "heavy" schwere-Aufklärungs-Kompanie (mot.) which was to provide heavy weapon fire-support as required by the other reconnaissance units. Additionally, there was a separate schwere-Kanone-Zug (heavy Gun Platoon) under battalion control, equipped with eight-wheeled armored cars with short-barreled 7.5cm howitzers.

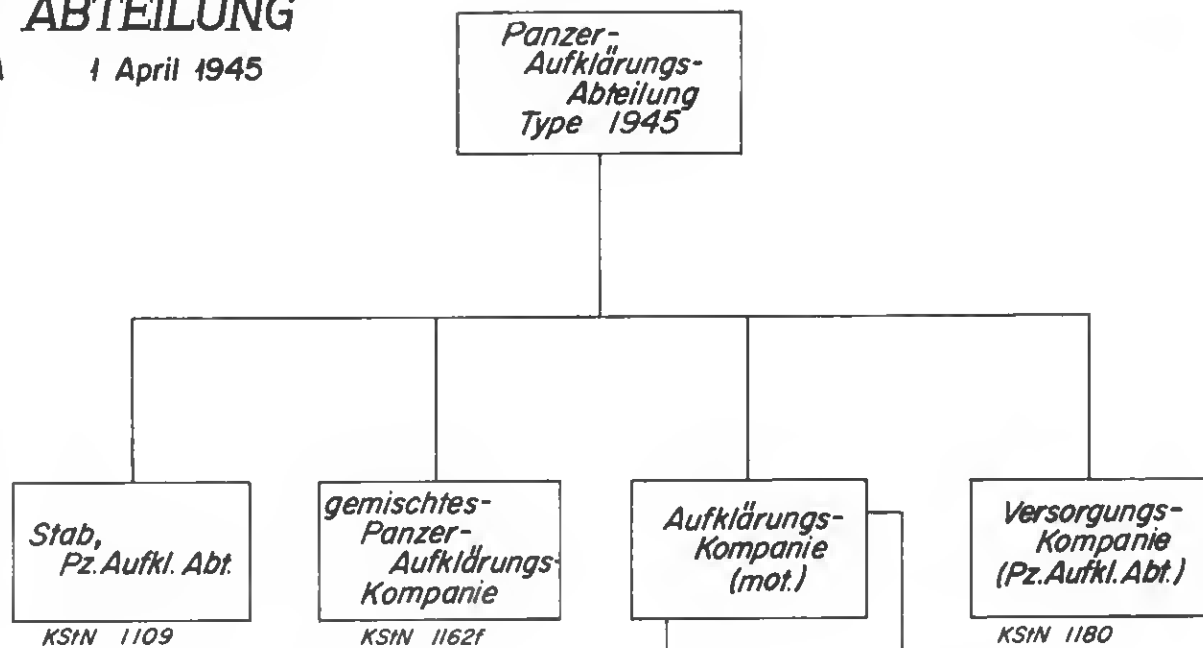
In late-1943, the Panzer-Division was again reorganized, with the idea of improvements based on new equipment and combat experience. The divisional Panzer-Aufklärungs-Abteilung was reorganized as shown above; this reorganization was due to several factors. The 1943 organization was judged too large and experience showed that control of the wide-spread companies was the critical problem. The result was a simplified battalion that lost none of its heavy weapons or reconnaissance potential. In the 1944 organization the two light armored car companies were replaced by a single company which was normally equipped with the same Sd. Kfz. 222 (under KStN 1162c). There could be variations in this unit, depending upon the assigned mission, the terrain or the available equipment. For example, some divisions might have one company (under KStN 1162a) equipped with the Sd. Kfz. 234 5cm-armed "Puma", or one company (under KStN 1162b) equipped with either the Aufklärungspanzer 38(t)

or the Panzerspähwagen II, "Luchs". The 1943-type company equipped with the light Sd. Kfz. 250 was retained, but was re-equipped and redesignated. As the leichte-Panzer-Aufklärungs-Kompanie (gp), it was equipped with the turret light halftrack (Sd. Kfz. 250/9), and its assigned mission was now the same as the former light armored car company. A new added company type was the Panzer-Aufklärungs-Kompanie (gp); this was simply an armored infantry company equipped with the medium Sd. Kfz. 251/1 armored halftrack. This unit was added to the battalion organization to stiffen the unit's offensive and defensive power; with this company, the battalion could serve as a Panzer-Kampfgruppe for attacks in conjunction with armored companies, or it had an increased ability to hold and defend terrain. Both of these new missions were dictated by the changed fighting conditions on the Eastern front, where defense and counterattack were now the order-of-the-day. As was the 1943 organization, the battalion retained the "schwere" company, but this was now completely armored (instead of motorized) with both 7.5cm gun and heavy mortar platoons in armored half-tracks (variants of the Sd. Kfz. 251 vehicle).

Shortly after the 1944 reorganization became effective, the division was again changed under Generaloberst Guderian's "frei-Gliederung" concept. This concept removed the company's administrative, mess, supply and maintenance functions and concentrated these in one new company, the Versorgungs-Kompanie. The basic ideas behind this consolidation were 1) to eliminate the non-combat troops from the "line" companies, and 2) to concentrate all administrative functions in one unit with greater efficiency and less administrative personnel. Of course, the underlying idea was to free more personnel for combat roles. The "frei-Gliederung" concept was successful and it continued into the 1945 reorganization.

PANZER- AUFKLÄRUNGS- ABTEILUNG

CIRCA 1 April 1945



In the closing days of 1944, the German Panzer-Division was again re-organized; this last change was designated as the "Type 1945". Under the different conditions of battle in 1945, the need for offensive and armored reconnaissance had greatly decreased. Instead, battlefield reconnaissance was strictly defensive in scope and the Aufklärungs-Abteilung was often considered as a divisional "reserve" which was used as a counterattack force to counter Soviet (or American) breakthroughs.

Under these changed requirements, the 1945 Aufklärungs-Abteilung was greatly streamlined. The 1944 Stabskompanie (Headquarters Company) was eliminated leaving just the Staff (Stab) and an abbreviated Signal Platoon (Nachrichten-Zug). There was a single armored car company, but this was changed to a mixed unit that contained both light and heavy vehicles. This "gemischte-Panzerspäh-Kompanie" was organized under KStN 1162f. In addition to this armored unit, there were two motorized Aufklärungs-Kompanien which quite probably were motorized Infantry companies. At the time of this article, the actual KStN number and organization has not been determined, however, a German manual of the period refers to the unit in infantry terms and it seems likely that the concept for these two companies was in the role of a defensive, ground-holding force. In addition to these units, the 1945 organization also included a Versorgungs-Kompanie to handle supply, maintenance and administrative tasks in support of the battalion's operations.

The charts on this and the preceding pages are designed to show the various types of Aufklärungs-Abteilungen with blocks to represent each of the separate units that were assigned. The KStN numbers are listed under each unit block for reference purposes, except for the two "schwere-Aufklärungs-Kompanien". These units were

built (or constructed) from "sub-units" (Teil-einheiten) which each had a separate (and different) KStN number; there was insufficient space to list all these sub-units. For extra clarity in the charts, the left side of "company blocks" were thickened to allow easy distinction; this was a typical German practice on map and tactical symbols.

In future issues, this article on German Panzer-Aufklärungs- (or Armored Reconnaissance) units will be continued, with company organization charts to illustrate the various types of armored car or reconnaissance companies briefly outlined in this introduction. An initial concept for the future presentation was to start with the Type 1943 battalion, preceding to the 1944 and 1945 organizations in order, however, this does not take personal interests and desires into account. The author would be interested in hearing from readers who would care to request specific units to be presented first. We have received some requests for an organization chart to cover the 1942-43 motorcycle (Kradschützen) company and this subject will be first in the forthcoming series of company organization articles.





Book Review: SUTC Referee's Rule Book, by Michael F. Korn (The Limpex Company, 100 North Whisman Road, Suite 139, Mountain View, CA., \$2.50)

Review by James Steuard

This new publication is a 48-page booklet devoted to the study of Small Unit Tactical War-games, as differentiated from the Strategic (typified by Board games) wargame or the Tactical (typified by Miniatures games) wargame. In this type of game, two opponents each act as the leader of a squad (or at most a platoon); a third individual serves as the "referee" (In the text, he is compared to a computer!) to "inform each opponent separately of what he can see, hear, and shoot at". The players cannot see the playing board (or sand table) and so must depend upon a map to guide the maneuvers of their small unit. The players must designate their actions and orders to the referee who acts both as the individual soldier and as the higher command link. The game is designed to test (and condition) the players reactions to the unforeseen and unexpected actions that can only come from an opponent who is in the same situation. Each of the playing turns takes five minutes and represents 30 seconds of actual battlefield time, during which time the small unit moves, listens and watches for enemy actions.

With its few requirements (only a small playing board (for the referee), two maps and the rulebook), this gaming concept seems extremely practical for a continuing game between two (or three) friends who do not have the resources and/or space to engage in miniatures play. This small rulebook contains all the information needed to get started, along with the tables and statistical data for the referee, and it seems a simple easy introduction to wargaming for little money.....

Book Review: Die Grosse Offensive 1942 Zeil Stalingrad, by H. Scheibert and W. Haupt (Podzun Verlag, Dorheim, Germany, \$9.95)

Review by S. R. Cobb

Upon first opening of this 140-page book, it would seem to be a very good buy, with almost all the pages in color. There are hundreds of color photos with a few black and white, to make the book a much needed item in any reference library. The book covers the beginning stages of the Russian campaign leading up to the attack on Stalingrad, then the internal battles for the city, including maps, and finally, the events that spelled defeat and annihilation for the German Sixth Army.

Most of the text is in German with a loose translation provided in English for only the photo captions. It's a pity that the book doesn't give translations of the chapter introductions, the maps, or at least a better translation of the photo captions; just think of all the information you could gain, if you (the reader) could only read German! I feel personally that more books with translations that are the quality of "Panzer im Russland" will have to be produced if German books are expected to sell well in English-speaking countries.

Although it's nice to see a book of this type, one dealing with armor in color, the basic approach is limited so much that a good many photos in this book had to come out of other books or magazines. This is obvious as the center binding can be clearly seen running through the middle of a number of the photos; perhaps they came out of German wartime magazines, such as "Signal", but I have seen some of them previously in "Ballentine Books", "Purnell's History of World War II" and "Almarks Books".....

Even so, with the numerous drawbacks, if you like to see German armor in combat scenes in color, this book is a good buy at \$9.95, either from your local hobby shop or book dealer.

ANZIO



'The Soft Underbelly of Europe'

Part Five

by John Yonos

The U.S. Fifth Army had launched a major attack against the German positions on the Gustav (or Casino) Line on 15 January 1944. Only the British X. Corps had any success in this attack; they had crossed the Garigliano River. This had caused the German commander, Feldmarschall Albert Kesselring, to send his only reserves to the threatened sector; thus, the area immediately south of Rome was denuded of any viable force.

At 0200 hours on 22 January, the U. S. VI. Corps landed at Anzio. The Corps Commander, General John P. Lucas, was given three divisions to seize the beachhead and also to secure the Albano Hills, some thirty miles inland. Allied intelligence warned that there were at least two enemy armored divisions in the area, and so General Lucas made plans for the seizure of the ports; he would then await the enemy counterattack.

The Germans reacted to the landing by first sending Luftwaffe anti-aircraft units to delay the Allied advance out of Anzio. The codename "Fall Richard" went out to certain units in France, Yugoslavia, Germany and northern Italy for them to assemble around Anzio, and the Hermann Goring Division was sent back from the Gustav Line. Feldmarschall Kesselring was thankful that the Allies had not advanced more than a few miles by the third day of the invasion.

When no counterattack had developed by 28 January, plans were made to take the Albano Hills. First, the Corps was to extend its territory by securing the towns of Campoleone (see AFV-G2, Vol. 3, #12) and Cisterna (see AFV-G2, Vol. 4, #1). Both attacks were stopped short of their goals by the Germans. The VI. Corps then went on the defensive.

Under personal orders from Hitler, General Eberhard von Mackensen, commander of the Fourteenth

Army around Anzio, attacked the British 1st Infantry Division in the Campoleone salient. Diversionary attacks were made against the U.S. 3rd Infantry Division; although the Americans lost some ground, the British salient had been eliminated. The Germans had won the Factory, but it had cost them heavily.

While the Germans moved men and equipment into the Factory, the 3rd Battalion, 504th Parachute Infantry Regiment (504th) was sent to aid the 5th Bn, Grenadier Guards and the 1st Bn, Scots Guards. As they approached the new positions of these units in Carroceto, about 500 yards southwest of the Factory, they found the Germans launching a strong probing attack. The Americans immediately counterattacked the exposed German flank, breaking up their attack.

Other reinforcements were being rushed to aid the distressed British 1st Division. On the morning of 9 February, General Harmon ordered Major William R. Tuck to send his 1st Battalion, 1st Armored Regiment to attack the Germans on Buonriposo Ridge. Company A (light tanks) proceeded along a dirt road north of the first overpass. German artillery, tanks and anti-tank guns slowed them down so that by noon they had advanced only one mile; however, they knocked-out a Panzer IV, and helped break-up an enemy infantry attack. At noon, Company B (light tanks) attacked the south side of the ridge. As they proceeded through the stream in front of the positions of the 1 KSLI and the 2 Foresters, they encountered a minefield that cost the company two tanks. They attempted to get around the minefield but lost another five tanks to the mud. Intense German small arms and anti-tank fire prevented these vehicles from being extricated without additional losses.

The 3rd Battalion, 1st Armored Regiment sent

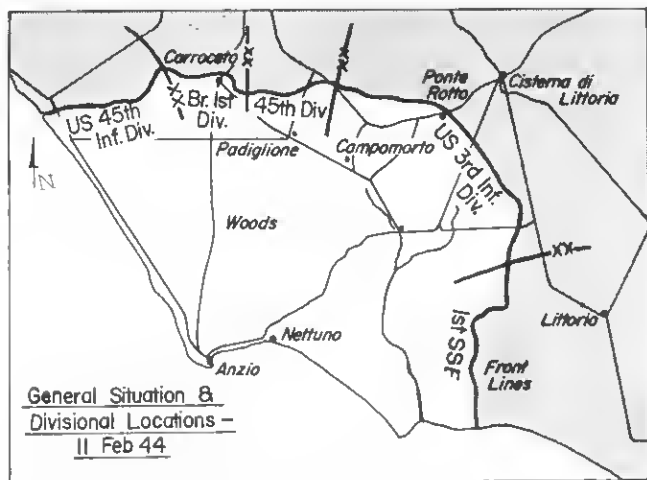
Company H (medium tanks) up the Albano-Anzio road and Company I (medium tanks) to the right of the Factory. Company H was stopped by a German minefield just north of the Factory; there it knocked-out one enemy tank and two anti-tank guns. The Americans did not attack the factory itself, due to the numerous German tanks and anti-tank guns located there. Company H later knocked-out an additional two Panzer IV, 's before withdrawing to friendly lines. Company I helped the 1 London Irish to mop up the remaining enemy east of the Factory.

German observers using the Factory called artillery fire down on the Allied positions in and around Carroceto. Shortly after midnight, fifteen German tanks

anti-tank gun. The second tank got 200 yards further up the road before it suffered the same fate. Company A's tanks withdrew under cover of a smoke screen. Company A, 179th Infantry attacked the Factory under the covering fire of the tanks, but they were held-up by German infantry dug-in around the buildings. Company B of the 191st Tank Battalion attacked from the southeast along with Company B of the 179th Infantry. They poured fire into the Factory until forced to withdraw for more ammunition. Company A sent six tanks up to the overpass to continue the shelling. By noon, when the Americans withdrew, the Factory had been reduced to rubble.

At 1300 hours, the tanks and infantry began their second attack. The artillery fire had caused the German tanks and self-propelled guns to withdraw from the buildings, and Company A, 179th Infantry fought its way into the southeast corner of the Factory. German infantrymen swarmed out of the basements where they had found shelter from the artillery. In the close, hand-to-hand combat that followed, the outnumbered Americans became disorganized and were forced to withdraw. Company B, 179th Infantry also fought its way into the Factory only to be driven-out by returning German tanks. By nightfall, the Factory was still in German hands.

At 0200 on 12 February, Lt. Col. Wayne L. Johnson, commander of the 1st Battalion, 179th Infantry, sent his men at the Factory again. Company B attacked from the south, while Company C attacked from the southeast; Company I protected the right flank, and Company C of the 191st Tank Battalion supported the attack by fire. The tank company had moved up to a road junction southeast of the Factory but they had been stopped by an enemy minefield, losing one tank. The infantry companies (B and C) fought their way into the Factory, only to be thrown back out two hours later by a German tank-infantry counter-attack down the road. After withdrawing, the American infantry established new positions about 500 yards south



and a battalion of infantry emerged from the Factory and hit the 1 Scots Guards just north of Carroceto. Company B of the 894th Tank Destroyer Battalion, and artillery fire broke up this attack. At 0430 hours, the 5 Grenadier Guards and the 3rd Battalion, 504th Parachute Infantry were attacked from three sides; only support from the 46th Royal Tank Regiment enabled them to hold. Meanwhile, the situation with the 1 Scots Guards had worsened; contact with the two forward companies was lost, and the rest of the battalion withdrew into the perimeter of the 5 Grenadier Guards. The retreat was covered by the M10's of Company B, 894th Tank Destroyer Battalion.

On the morning of 10 February, two German attacks on Carroceto were broken up by artillery fire. All of the resources of the various Allied air units were allotted to VI Corps, but, unfortunately, an overcast prevented most of the bombers from unloading their bombs on the designated targets. The German 65. Infanterie-Division occupied the Carroceto railway station in the late morning, but they were driven out by an Allied tank-infantry counterattack. Later, during the evening of the 10th, the station was retaken by elements of Kampfgruppe Graeser.

By this time, the British 1st Division was exhausted and in need of relief. The U.S. 45th Infantry Division relieved the British of over one half of their front, allowing part of the British troops to rest from combat. The front lines and the rest areas were so close that the Germans could and did fire their artillery on landing craft in the harbor; there were no true "rest areas" at Anzio except in graves.

An Allied counterattack was planned to be made by the 1st Battalion, 179th Infantry Regiment (179th Infantry) of the 45th Division, and Companies A and B, 191st Tank Battalion on February 11th. At 0630 hours, the tanks and infantry moved-out, Company A moving up the Albano-Anzio road. As the first tank passed through the overpass, it was knocked-out by a direct hit from an



of the Factory. The Factory and Carroceto were firmly in German hands, and General von Mackensen had his springboard for the destruction of the beachhead. However, the attrition on the German forces had cost him heavily, and his men needed a few days to rest and reorganize before the next attack.

On 13 February, the 167th Brigade of the British 56th Infantry Division arrived; it consisted of the 8th Battalion, Royal Fusiliers (8 Royal Fusiliers), the 9th Battalion, Royal Fusiliers (9 Royal Fusiliers), and the 7th Battalion, Oxfordshire and Buckinghamshire Light

Infantry Regiment (7 Oxford Bucks). The remainder of the 56th Division, the 169th Brigade, would arrive on 18 February. The 169th Brigade consisted of the 2/5, the 2/6 and the 2/7 Battalions, Queen's Own Royal Regiment (2/5 Queens, 2/6 Queens, 2/7 Queens).

With the arrival of the 167th Brigade, the exhausted British 1st Division was relieved of combat duties and placed in Corps reserve. The 167th Brigade took over the sector along the Moletta River; the 168th Brigade was to their right holding an area extending almost



*Shoulder Sleeve Insignia-
British 56th Infantry Division
"A sitting black cat
on a red rectangular
background."*

to the Albano-Anzio road. Next came the 180th Infantry Regiment (180th Infantry), the 179th Infantry, and the 157th Infantry; all these units were from the U.S. 45th Infantry Division. On the right were the regiments of the U.S. 3rd Infantry Division and then the 1st Special Service Force. In addition, the Allies had 432 pieces of artillery at Anzio, supplemented by Allied cruisers and destroyers off-shore.

At 0600 hours on 16 February, enemy artillery opened-up on the center of the beachhead line. Shortly thereafter, the 3. Panzer-Grenadier-Division and the 715. Infanterie-Division attacked the positions of the 157th Infantry and the 179th Infantry. German observers in the Factory and Carroceto called-down artillery on the entire center of the Allied line. Groups of four to eight German tanks would sally-forth to fire almost directly into the foxholes of the GI's. When they had exhausted their ammunition, they merely returned to their assembly areas for resupply. The main enemy thrusts were against the 2nd Battalion, 157th Infantry, and the 2nd and 3rd Battalions, 179th Infantry.

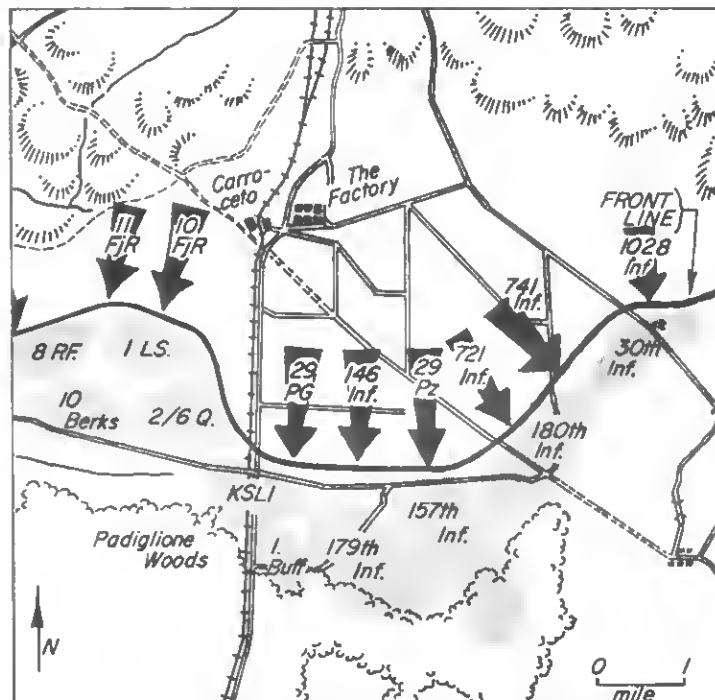
Companies F and G of the 179th Infantry were pushed back by the waves of Germans; soon Company F was down to thirty men and had lost all their machine guns. A platoon from Company L was sent to help Company I break-out of an encirclement. The Allied artillery poured fire into the attackers but the Germans seemed to ignore casualties. Finally, the "elite" demonstration unit, the Infanterie-Lehr-Regiment, broke under the pounding and retreated. This unit had never seen combat, having been used only for demonstration purposes in Germany; when the unit was observed fleeing in disorder, other German units began to fall back.

When the attack started, three tanks of Company A, 191st Tank Battalion were behind a farm house near the Factory. One tank was knocked-out by artillery fire. At noon, when the Germans attacked the farmhouse, Sgt. Charles W. Keyser, in charge of the two remaining tanks,

turned the turret of his tank towards them. The 75mm shell grazed the building and exploded among the enemy. A second attack was broken-up with hand grenades; then two German tanks approached. Sgt. Keyser engaged them, knocking-out the first and setting the other tank on fire. In the late afternoon, the other tank in the section was hit, and at the same time, Sgt. Keyser's radio went-out. At 1615, six German tanks came down the road; laying a smoke screen with his turret mortar, Sgt. Keyser attempted to flee. His tank was hit, but he managed to get out and hide, returning to Allied lines after dark.

In the British 56th Division sector, the German Sturmregiment 12, overran the forward companies of the 8th and 9th Royal Fusiliers. By using the wadis, two companies of Fallschirmjäger-Regiment 10 managed to reach the final beachhead defense line! A counter-attack by the 46th RTR eliminated the latter penetration. Other German units struck the forward companies of the 7 Oxford Bucks. Although wherever the Germans attacked along the Moletta River, they succeeded in penetrating the British line, these attacks were only diversionary.

The main German attacks were launched against the 3rd Division. The principal attack fell on the point where the 2nd Battalion, 7th Infantry and the 3rd Battalion, 30th Infantry met. At one point, the Hermann Göring Division's reconnaissance battalion penetrated 300 yards between the two defending battalions. Only heavy artillery fire checked this attack. Company K, 30th Infantry was forced back to its command post. The 751st Tank Battalion, supporting the infantry, knocked-out five German tanks and a halftrack. By evening, the German



*THE GERMAN PENETRATION - SHOWING
UNIT POSITIONS, 22 Feb 44*

penetrations had been eliminated by Allied attacks.

The 504th Parachute Infantry was also attacked by German units from Cisterna, and some of the German elements were also bothering the 1SSF. Two outposts beyond the Mussolini Canal were wiped-out in this attack but the Germans were unable to get across the canal. Company C, 894th Tank Destroyer Battalion knocked-out three tanks and a self-propelled gun. The German casualties in front of the 504th were so heavy that the enemy asked for an armistice to remove the wounded.

Just before midnight on 16 February, one company of Infanterie-Regiment 725, worked its way around the flanks of Company E, 157th Infantry, while another company infiltrated into the American positions. By dawn, Company E was down to 14 men. These were grouped around the command post with three M3 Shermans from the 191st Tank Battalion under 1st Lt. Thomas L. Cobb Jr. At 0500, Capt. Felix L. Sparks, the Company E commander, received orders to withdraw. As they pulled back, four German tanks were moving-in on the flanks of the American company, but at least two of the enemy tanks were destroyed by the Shermans as they withdrew.

At 0740, the German Luftwaffe put-in its most useful appearance of the battle. Approximately 35 Focke-Wulf FW-190's and Messerschmidt Bf-109's bombed and strafed the American units on either side of the gap created by the withdrawal of Company E. Next, German infantry moved-in. The Germans widened the gap, using Infanterie-Regiment 725, two battalions of Infanterie-Regiment 145, and elements of Infanterie-Regiment 714, supported by about sixty tanks operating in small groups.

The 3rd Battalion, 179th Infantry was attacked by an enemy infantry-tank unit, east of the Albano-Anzio road. Another German force struck the 2nd Battalion, 179th Infantry on its flank. This isolated Company G, which had been under attack all night. Colonel Malcolm R. Kammerer, commander of the 179th Infantry, ordered his 2nd and 3rd Battalions to withdraw to the Carroceto Creek. In this withdrawal, Company G was destroyed and Companies E and F, along with neighboring Company A, were forced all the way back to the "dead end road" about one mile north of the final beachhead defense line. At 1040, the Luftwaffe again strafed the two battalions, and a bomb knocked-out all communications at the 3rd Battalion's command post.

All afternoon, fresh German units were committed to widen the crack in the VI. Corps line. All the resources of the Allied air power in Italy were unleashed on numerous German targets; over 700 bombing missions (including 288 by heavy bombers) were conducted against the enemy. In addition to the 432 artillery pieces, three tank companies and four 90mm anti-aircraft batteries were employed against ground targets as artillery. Two naval cruisers used their guns as floating batteries on the flanks of the beachhead. Still the Germans came.

The main enemy thrust was still against the battered 2nd and 3rd Battalions of the 179th Infantry. German tanks and infantry penetrated as far as the "dead end road" where they occupied some farmhouses. Two German tanks got as far as the first overpass before being knocked-out! The 2nd Battalion, 157th Infantry, on the left of the 179th, was almost surrounded! Although regimental command posts were knocked-out, and communications were disrupted for a while, the combat battalions still held the line. Lt. Col. Lawrence C. Brown, the commander of the 2nd Battalion, 179th Infantry, had pulled the remnants of his battalion into an area of wadis and subterranean caves. Here, he organized an all-round defensive position.

Shortly after noon, Company H, 1st Armored Regiment moved past the first overpass; one platoon advancing further to aid the infantry, who were being attacked by enemy tanks. Company I of the 1st Armored Regiment followed the "bowling alley" to support the 3rd Battalion, 179th Infantry. Both roads used by the tanks were targets for German artillery. The American tankers could do little about regaining the lost ground, but they did give much-needed anti-tank support to the infantry. However, by dusk both tank companies withdrew to avoid infiltrators.

The British 1st Division, with the exception of the 3rd Brigade, was released from Corps reserve and placed in the final beachhead defense line, behind the British 56th Division. The 2nd Battalion of the U.S. 6th Armored Regiment was attached to the 45th Infantry Division. Due to the fact that General Penny (the 1st Division commander) was wounded, General G.W.R. Templar took command of the 1st Division in addition to his own 56th Division; this had the effect of unifying British command.

General Eagles, commander of the 45th Division, ordered his battered 2nd and 3rd Battalions, 179th Infantry and the 3rd Battalion, 157th Infantry to counterattack the German salient during the night. The 191st Tank Battalion, under Major Asbury W. Lee, was to support this advance. The 3rd Battalion, 179th Infantry was down to 274 men and the 2nd Battalion was no better-off. Capt. Merle M. Mitchell, commanding the 3rd Battalion, 157th Infantry, though wounded in the stomach, refused to be evacuated and led his men in the attack. Unfortunately, his unit arrived at the line-of-departure late, and by the time he jumped-off, the Germans had brought-up machine guns which raked the attacking companies. Try as they could, the 3rd Battalion could not get past the "dead end road". Lt. Col. Charles D. Wiegand, the

- Continued on the next page -

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Ron & Al Cicerchi

The Japanese Type 95 Light Tank "Kyu-Go" (Continued from Page 17).

the radio operator, provided his tank was one of those so equipped. To complicate his gunnery job, the two turret-mounted weapons were not coaxial; the 7.7mm machine gun was mounted in the rear face of the turret, pointing 150° away from the direction of the 37mm cannon. This meant literally that the commander had to keep watch over two separate weapons, and since the turret was hand traversed, he had to expend considerable energy just to point the weapons in the correct direction. All of the crew members were severely restricted in vision while the tank was "buttoned-up" and there was little in the way of splash protection for the crew members while they were observing through the vision slits. In the light of later, less obsolete vehicles that served during the early stages of World War II., the Japanese Type 95 had obvious shortcomings that could mean the difference between success and failure in tank versus tank actions. Of course, Japanese employment of armored units in the early campaigns of World War II. was against poorly equipped and armed opponents who usually lacked any weapons to successfully oppose an armored assault, and with little opposition, the Japanese Type 95, along with its bigger brother, the Type 97 Medium Tank, was more than adequate.

CLASSIFIED ADS! Starting in the next issue of AFV-G2, a Classified Advertisement Section will offer ads for wants and disposals. There will be three sections; 1) For Sale, 2) For Trade, and 3) Wants. Classified ads will not be limited strictly to armor, but may cover anything in the general military field. Rates for subscribers will be 20 words for \$1.00 with each additional word costing 4¢. Non-subscribers rates are 10¢ per word. Advertisements may be from both commercial and reader sources, and the deadline for advertisement copy will be the 15th of the month preceding release.

Anzio, the Soft Underbelly of Europe (Continued from Page 31).

commander of the 2nd Battalion, 179th Infantry found his flank exposed, and was forced to order a withdrawal. The Germans sent tanks and halftrack-mounted infantry against the unit, and Company E was partially cut-off. In the 3rd Battalion sector, Companies K and L had reached their objectives only to find that Company K had fought its way into a trap. Things became confused and the entire counterattack came to naught.

Taking advantage of the confusion caused by the unsuccessful Allied counterattack, the Germans thrust deep into the 179th Infantry's positions. Company K was hit hard, and only remnants of the 3rd Battalion reached the final beachhead defense line. German tanks moved down the "bowling alley" until stopped by a blown bridge, and German infantry attacked the 1 Loyals at the final defense line. Company I, 157th Infantry was holding positions just before the first overpass, and German infantry were pressing attacks on them. Although they repulsed two infantry attacks, their casualties were mounting and food and ammunition were almost gone. Five of the company's officers had been killed and Capt. James G. Evans, the company commander was hard pressed to find men to mend commo wire or to send for supplies.

As the battered 179th Infantry was withdrawing to the final defensive line, the 2nd Battalion, 180th Infantry was under attack from three sides. When the order went-out to Companies F and G to pull back, all but one platoon of Company G failed "to get the word". Virtually surrounded, the men of Company G, under the command of 1st Lt. Benjamin A. Blackmer, fought off every German attack launched against them.

At 1400 hours, Col. William O. Darby of the American Rangers was placed in command of the battered 179th Infantry. Since the 3rd Battalion was so badly mauled, it was withdrawn to reorganize. As the 2nd Battalion was down to less than half strength, the 1st Battalion had to defend most of the regimental sector. The 2nd Battalion was to hold the right flank with the men they could find, and Major Merlin O. Tyron, commanding the 3rd Battalion, was to round-up all stragglers and men physically fit from the "rear" of the beachhead as replacements.

With almost all anti-tank weapons destroyed, German tanks were virtually free to roam at will. Both the defending 191st Tank Battalion and 645th Tank Destroyer Battalion had suffered heavy losses; on 17 February alone, the 645th had lost fourteen M10's to enemy fire. The situation looked desperate, and officers at Corps headquarters were doubting if the beachhead could be defended if the Germans launched more heavy attacks with fresh troops. The Anzio beachhead was becoming the German death's head.

- To be continued next issue -

The Admiral and the Afrikakorps (Continued from Page 9).

a devastating anti-tank weapon at close range. The Indian gunners rammed-home solid shot and leveled their barrels at the Italian tanks. "C" Troop of No.7 Battery was the first engaged. The British Gun Position Officer and two of the gun commanders fell under the storm of shell and machine gun fire, but the depleted crew continued to fire until physically overrun - the last shot smashing a tank less than 10 yards from No.3 gun. In all, 32 tanks fell to the 2nd Field Regiment before the last gun was put out of action.

Meanwhile on the perimeter, the Motor Cavalry Regiments disintegrated into isolated and un-coordinated groups. All of the 2-pounders had been silenced and now the second wave of tanks prowled the area, moving up to a slit trench and ordering its helpless occupants to join the growing group of prisoners. Then into the mass of milling vehicles, dust and smoke came the British counterattack - eleven Bren Carriers under Lieutenant Gillingham of the 18th Cavalry. Armed only with a Boyes A/T rifle and a light machine gun, the carriers had no chance, and they were quickly dealt with.

Through the smoke, two Pz.Kpfw.III's emerged to find a solitary figure standing in the desert sun. The tank commander of one of the tanks raised his head from the turret cupola and called on the Englishman to give up. The reply was startling. "Dog, I will Not surrender!" And, to emphasize his point, the crazy Englishman lifted a revolver and peppered the 25-ton enemy tank with .38 caliber bullets. Surprise, disbelief, or admiration kept the Germans from returning the fire; and, when the Webley's hammer fell on an empty cylinder, the tank crews dismounted and groped with their defiant antagonist. It was an unequal struggle; after all, Admiral Cowan was 72 years of age.

Footnote: After his capture, Sir Walter Cowan was sent to a POW camp in Italy where, a few months later, he was repatriated due to his advanced age. This was a mistake, for in 1944, the Admiral was back in action. He had parachuted behind German lines into Yugoslavia, where he fought with the partisans until the end of the war!

Armor in Vietnam; Self-Propelled Artillery (Continued from Page 10).

vehicle is shown at a base installation being maintained by its crew (note the helmets showing at the rear). For another photo of an M-110 of the same battery, see the article on the M-548 Cargo Carrier. The 8" howitzer on the M-110 fires a 200-pound separate-loading projectile; as there is no muzzle-brake to reduce recoil, the M-110 has a "spade" that is lowered into contact with the ground to transfer and absorb recoil shock. Most of the gun crew are not transported on the M-110; instead, they ride in an accompanying cargo carrier (a M-548) which also serves as an ammunition re-supply vehicle.

New Products

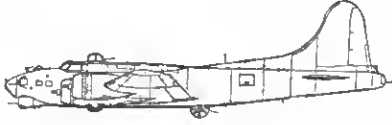
The Japanese firm of Bandai continues to release new items of 1:48th scale armor faster than we can mention them in this column! The latest is a really beautiful model of a Sturmgeschütz III, Ausführung D. The kit has an engine with opening hatches, and includes three crew figures, a set of bare trees and a packet of "scale" snow for diorama construction. The kit is expected to sell in the \$4.00 area when shipments arrive. Bandai has also released a 1:48th scale model of the Jagdpanzer 38(t) Hetzer; this kit is highly detailed and is very accurate, and includes three figures, a detailed engine and can be highly recommended. Bandai seems to be covering the entire World War II German scene, with early vehicles (the Panzer IV.D, the Hanomag '251/1'B and now the Sturmgeschütz III.D) and the late vehicles (such as the Panther and the Hetzer). . . . The latest in Hasegawa's "Mini-Box" series have arrived; these are Numbers 3 and 4, and both continue the American vehicle series reported in the last issue. Number 3 is a really nice 1:72nd scale model of the U. S. Army M3 "Stuart" Light Tank (designated the "Stuart Mark I," on the box); this is the first Stuart model on the market and it will probably be very popular. Number 4 in the "Mini-Box" series is a 1:72nd scale model of the M3 "Lee" Medium Tank that was widely used by the British Eighth Army in the North African desert fighting. The model looks accurate and should also prove popular. Hasegawa is to be congratulated for bringing out these models of American armor that have been lacking for such a long time on the modeling scene.

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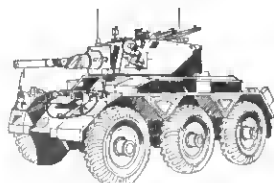
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Letters to the Editor

To the Editor:

I am attempting to compile a bibliography of personal accounts of tank warfare. Thus far the only book that I have been able to locate which meets this description is "Brazen Chariots" (by Robt. Crisp). I am sure there must be other works (in English or German) of this sort. Would you be able to help me?

Dr. John A. Laska
Center for International Education
223 Sutton Hall
The University of Texas
Austin, Texas 78712

Note from the Editor:

We are printing Dr. Laska's full address in case some of our readers might wish to assist him in this most interesting project, which deserves support.

To the Editor:

Your releases continue to be excellent and if possible even better as time rolls along.

Your current issue (IV/2) has two things of great interest to me, 1) the M7 Gun Motor Carriage - I had the privilege of introducing them to the 5th Royal Horse Artillery in Cairo and converting them from their 25-pdr. towed guns to the M7's - it was just before Alamein and they did well knocking-out 8.8's which were dug-in, by use of 105mm time-fuzed HE - bursting over the 8.8's. 2) The discussion of German ammunition. Nearly all those rounds mentioned I saw and/or fired in test in Cairo or at Aberdeen Proving Ground - all but the Cannister mentioned which I never encountered. All are in our museum collection. Mark Diehl did a good job.

Our official museum opening is 18 May and I hope that you can mention this to your readers.

Col. G. B. Jarrett, Ret'd.
Aberdeen, Maryland

To the Editor:

I have just finished reading the January issue of your magazine. It resulted in one question, although it is not really your department to answer. Perhaps somebody else will be able to answer it. The problem lies with the "re-birth of the cavalry"? I realize that motorcycles are intended for reconnaissance, but even reconnaissance has to stand and fight occasionally. What is going to happen in an ambush or a surprise attack. Even the Germans realized you needed a side-car for a firing platform (see page 29). All I can say is pity the man on the bike, he is DEAD if there is ANY kind of trouble.

N. Kamp
Lethbridge, Alberta, Canada

To the Editor:

Do you have any information available on radio control of model AFV's? Or, can you refer me to anyone who has done work on them, or who can provide information. Thank you.

J. C. Jacques
920-33A Street N.W.
Calgary, Alberta, T2N 2X3, Canada

Note from the Editor:

I'm sure Mr. Jacques would appreciate any help that our readers might be able to offer; if you have any information on radio control, please drop him a line.

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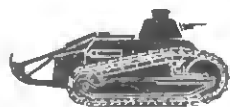
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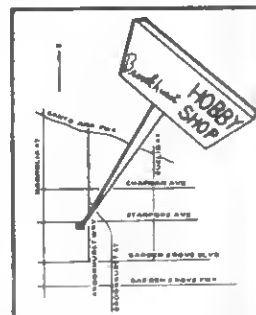
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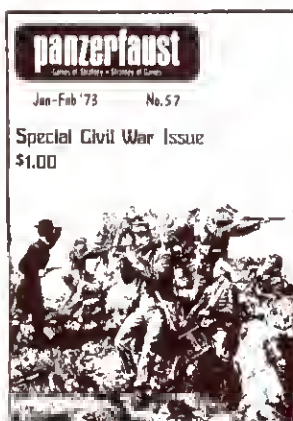
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